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THE
DESERTS OF SOUTHERN FRANCE



THE CAUSE DE SAUVETERRE.

[*Frontispiece.*]

THE DESERTS OF SOUTHERN FRANCE

AN INTRODUCTION TO THE LIMESTONE AND CHALK
PLATEAUX OF ANCIENT AQUITAINE

By S. BARING-GOULD, M.A.

AUTHOR OF "THE TRAGEDY OF THE CÆSARS" "MEHALAH"
"STRANGE SURVIVALS" ETC.

ILLUSTRATED BY S. HUTTON AND F. D. BEDFORD

IN TWO VOLUMES

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P R E F A C E



AT an epoch when everyone travels, a book descriptive of travels, especially in so accessible a portion of Europe as South Central France, is out of place. The time for such books, recording passing impressions, has passed away for ever.

The work now offered to the reader is accordingly nothing of this kind. It is a book of preparation for intending tourists, that they may be able to understand what they see, and see what otherwise they would pass unnoticed.

Moreover, I wish to draw attention to a portion of Europe, no part of which, I believe, Italy and Greece excepted, is so rich to extravagance in objects of interest, and in scenes of extraordinary picturesqueness; a portion of Europe, moreover, which should arrest the attention of English people especially, as for three hundred years it belonged to the English crown.

This portion of France, which was only accounted a portion of France at a comparatively late period, lies in a penumbra. It has been singularly neglected by Frenchmen, as well as by Englishmen. In the beautiful chapter that opens the second volume of his *History of France*,

Michelet reviews the soil of France, and describes its provinces. Singularly enough,—and yet characteristically enough of the general neglect,—he ignores Périgord, Quercy, the Gevaudan, and hardly touches on the Rouergue. All other portions he knew and described graphically; all the south central portion he knew of only by hearsay.

Historical writers and archæologists have not worked to any considerable extent on the history and antiquities of this portion of ancient Aquitaine.¹ The history of the English occupation remains unwritten.

A friend of mine, who, by my advice, went over some of the ground I knew so well, returned to England with a sense of bewilderment; he had seen so much, seen things so extraordinary, that he was in the position of the eunuch of Candace: “How can I understand, except some man should guide me?”

This was precisely my condition when I first visited the limestone and chalk district of South Central France; and when I came to work out the several questions that rose, I found that this could not be done without much labour, as there was no handbook at all which would help one.

There is an old familiar story of one's childhood, called “Eyes and No-eyes.” Two boys of the same age were sent out a walk by their tutor. On their return they were asked what they had seen. One answered, “Nothing at all.” But the other had a long list of objects of interest that had arrested his attention and occupied his observation.

The difference in the boys did not necessarily spring from difference of mental power, but from the fact that

¹ With the exception of the archæology of the palæolithic men on the Vézère.

one had been shown what he should look out for and notice, and the other had received no such preparation.

The late Robert Houdin trained himself to observe in the following way. He walked past a shop window, then went home and wrote down what was displayed in the window. At first he could write very little, but by daily repeating this experiment he so quickened his faculties of seeing and discriminating, that a walk past a shop front sufficed at last to enable him to write down immediately after an accurate account of all that was therein displayed.

Now the ordinary traveller no doubt picks up a certain fund of health and enjoyment when he takes his holiday abroad; but he does not acquire very much information. What he observes, he observes inaccurately, and puts down to causes that are occasionally incorrect. His pleasure is multiplied a hundredfold if he goes abroad prepared to understand things that his eyes rest upon. He returns not only with a fund of health, but also of valuable observation.

There always will be some who travel from Dan to Beersheba, and say "The land is barren"; but there will also always be some to whom the barrenness of the land presents a problem which they will seek to work out.

Most travellers to the South of France take the line to the Riviera, by the Rhone valley, or to the Pyrenees by Bordeaux, and so miss wholly that part of Southern France which lies in the fork. That it is an extremely interesting country, and abounds in scenes of really remarkable beauty and picturesqueness, I venture to assert. It is a country unhacked by ordinary tourists, and it is one which presents an inexhaustible store of interesting things. It is not merely a most delightful land, but it is one that is eminently educative.

A visitor to a country or district needs some knowledge of its history, or he cannot enjoy all he sees. The South-Centre of France has its own history, and I believe that without some knowledge of this, a visitor is not properly equipped to appreciate it. For this reason I have given a rapid sketch of the story of the land that has so interested me, and that I love so well.

One portion of the history of this land I have passed over without a word, and this is the story of the Camissards. It is a story especially sad, and it is one, perhaps *the* one, that is easily accessible to the reader. There are plenty of books on the Revocation of the Edict of Nantes, and the Dragonnades. I have therefore omitted this chapter.

I have, however, added a short life of Joachim Murat, as a typical Caussenard,—a man of whom the Causses of Quercy have reason to be proud, and whose family still live in the native home of the race.

With regard to other portions of history, and of matters prehistoric, I write not for the learned, but for the unlearned. When first I went with M. Massénat to Les Eyzies, I knew nothing of, and cared very little for, the reindeer hunters. But the deposits there laid hold of me, not I of them, and I had no rest till I had acquired a sufficient knowledge of the matter to be able to understand what I saw. So also with regard to the rock dwellings and the “castles in the air.” They puzzled me, and I worked at the history of the English domination, hoping therein to find the explanation of these puzzling habitations.

With the rude stone monuments I had been acquainted from boyhood, and I have two volumes of plans and drawings of dolmens made by me in several of the departments of the West in 1851.

I have not the space, nor have I the knowledge, to write exhaustively, or even learnedly, on any of these subjects. Besides, that is not my object. What I wanted for myself was to have a rough knowledge of the outlines, which I might fill in later, for my own private edification. And this is all I pretend to give to my readers, and it is all that an intending visitor to the district will require to have.

Finally, here is a bit of country practically unexplored abounding in beautiful scenery, in picturesque castles, in quaint churches, in historic reminiscences, in relics of prehistoric ages, in interesting geologic formations, and in mountain flowers, that can be reached in twenty-one hours. If you leave London by the night mail at 8.15 P.M., you are in Paris at 6 A.M. You cross to the Orleans station, start at 7.40, and are at Brive or Périgueux or Rodez in time for dinner in the evening. And as guide buy one of Joanne's admirable blue-backed one-franc geographies of the department you are in, and you will want nothing further.

In the Appendix I give the titles of works that can be referred to for fuller information on matters treated by me in a cursory manner.

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I have to express my gratitude to the editors of *The Graphic* and *Good Words* for kindly allowing me the use of illustrations that accompanied some articles written by me for their periodicals. Also to Messrs. Hurst and Blacket for the use of an illustration from Atkinson's *Amoor*, to Mr. R. H. Worth for kind loan of an illustration from a photograph, to Messrs. Hachette for use of blocks from *Le Tour du Monde*, illustrative of M. Martel's descent into Padirac, and M. Ch. Delagrave for others from the Club Alpin, employed in illustration of M. Martel's *Le Cévennes*.



STALAGMITES IN DARGILAN.

THE DESERTS OF SOUTHERN FRANCE

CHAPTER I

LES CAUSSES

The Margeride—Impervious Rocks—The Pervious Rocks of the Causse—The Extent of the Causse—Their Character—A Recent Discovery—Geologic Structure—Subterranean Rivers—The Causse not seen by Travellers—The Causse of Lozère—The Causse of Quercy—The Three Stages—The Chalk Platform of Périgord—Furrowed Rocks—The Ravines—The Pot-holes—Disappearance of Rivers—Denudation of the Causse—The Function of Forests—The Cirques as Winter Quarters—Cabrerets—Salles-la-Source—Beynac.

THE traveller from Clermont to Béziers and Narbonne, after having crossed that spider-thread viaduct of Garabit, ascends to a granite plateau of lakes and pools, of oozing springs and running streams. The pastures are perpetually grassy, in May starred with narcissus. They are roamed over by dun-coloured oxen, and in summer are cropped by tens of thousands of lean sheep, driven to these ever green pastures from the parched plains of Provence.

The granite is very ancient and decomposed. The

soil consists of crumbled elvan, overlain with a little peat. Nevertheless, owing to the abundance of water, this mountain plateau laughs with verdure. The reason why it is not a torrid waste, but a garden and lawn, is that the subjacent rock is *impervious*. All the rain that falls on the heights lodges there, the turf absorbs, the gravel retains it, and both yield up the moisture leisurely in springs. When the soil has drunk in all that it can imbibe, what



THE PROVINCES OF THE SOUTH CENTRE OF FRANCE.

remains lies on the surface in pools. This is the case, not only with this emerald Alp, the Margeride, but with its western continuation, the Monts d'Aubrac.¹ Here one of the lakes, that of St. Andéol, has been from time immemorial held so sacred that coins have been cast into its dark waters as oblations, first to one deity, then to another, and finally to a saint, so that if drained it would yield up a numismatic treasure in regular series from the beginning.

¹ These are of basalt as well as granite.

The train, after having crossed the granitic Alp, swings down the ravine of the brawling Crueize, and presently pulls up to draw breath and take in water at Marvéjols.

Here on the left is seen, standing above the town, a solitary peak of dry salmon-coloured rock, on which grow no shrubs, nor does it sustain any grass,—a fang of bald rock rising out of gums of equally naked rubble. This is the northern sentinel of the Causse. It is called Le Truc, and is over 3000 feet high.

The Causse consists of a barren region, which I propose to describe. This region, as its name implies, is of limestone (*calx*), and it is barren because the lime rock is—what granite is not—*pervious*.

The rains that fall on the mountain heights are drunk in at once; not a drop runs over the lips of the cause. It is far too thirsty to spill any. Every particle is sucked in, and disappears at once. The drops thus absorbed run together, not, as elsewhere, on the surface, but within, in articulate threads of water, then rills, lastly rivers, in the bowels of the great plateau.

I said one day to a peasant, "Truly you live on a fossil sponge."

"Pardon," was his ready reply; "on a stone sieve. A sponge absorbs water and retains it; a sieve lets all through and remains dry."

The Causse is a veritable desert: in winter a Siberia; in summer a Sahara; and this bleached, ghastly waste lies in, and occupies a large surface of, beautiful, smiling, luxuriant France. The Causse extends over a considerable area; they lean against the western flanks of the Cévennes, and extend south within sight of the blue Gulf of Lyons, and to the west within a hundred miles of

the grey, windlashed Bay of Biscay. They cover a large portion of the departments of Lot, Lozère, Aveyron, Gard, and Hérault, and rise from 2400 feet to 3000 feet above the sea.

“If the *cause* is too low,” says Onésime Reclus, “then the dwellers thereon are troubled with overmuch sun; if too high, then with overmuch snow. Always and everywhere where grow a few miserable trees, they are twisted out of shape by the wind. In place of lakes the *cause* exhibits morasses only, in place of rivers, ravines. The rocky pastures are browsed over by sheep and lambs with fine wool; the rubbly fields grow a sparse crop of barley, oats, potatoes, rarely wheat; where the altitude is inconsiderable, vines scramble. The soil, red or white, dies into the rocks, and is pierced by them. On all sides are seen accumulations of stones laboriously collected through long centuries for the clearing of the soil and the enclosure of the fields. Here they are piled up to form dry walls, there amassed in heaps, almost hillocks, like *vidette* stations, or those mountains of testimony to which every passer-by contributes a stone, in reprobation of a murder, in remembrance of a victim. In place of verdure are seen a few scattered box bushes, a few rare pines and oaks, some shrubs, the last survivors of the ancient forest that once enveloped these heights. Numerous dolmens scattered over the plains recall races long disappeared. The Caussenard alone can love the *cause*, but every citizen of the world can admire the gorges of mighty depth that cleave it, and the precipices that form the walls of this gigantic acropolis.

“In descending, by goat-paths, from the plateau by the precipices that edge them, one is suddenly transported from parched wastes to pleasant pastures, from vast

horizons vague in outline, and utterly sad in complexion, to joyous nooks of blended heaven and earth. Above, on that stone table, are wind, cold, nakedness, poverty, moroseness, hideousness,—a void, for few villages are found aloft; below, orchard land, warmth, gaiety, abundance. The startling contrast between some of the cañons and their causes forms one of the most phenomenal beauties of beautiful France."

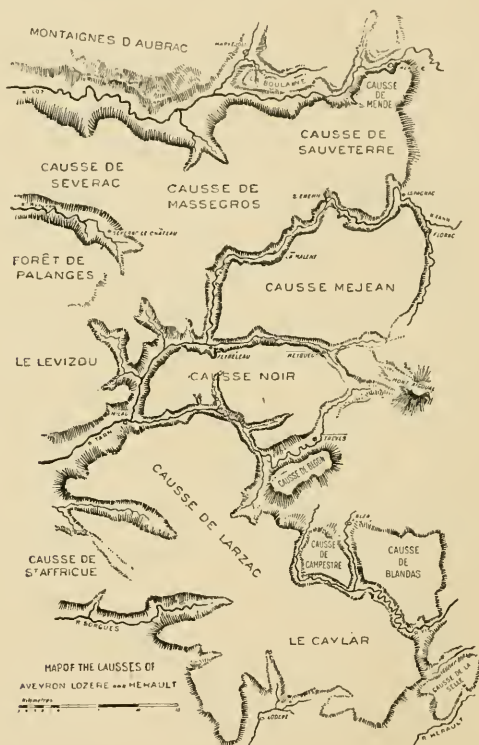
Such water as can be retained on the plateaux is collected in reservoirs; it is the drainage of roofs, of paved courts, the leakage of farmyards. They are replenished by every thunderstorm that bursts over the waste, and the water is retained by a lining of clay. The wells are mere reservoirs of surface water. They are roofed over, and resemble the beehive huts of the primeval men. At Les Baux, in Provence, where the Jura limestone forms the range of Les Alpines, a hill slope has been paved for the very purpose of shedding the rain that falls on it into the tanks from which the villagers and their cattle drink. The colour, odour, taste of this water, are sickening. It swarms with life of the lowest forms. It is possible to be a teetotaller in the ravines, not with impunity on the plateaux.

Precisely the same formation of limestone is found in the Jura, the Rauhe Alb, the Franconian Switzerland, the Carinthian Karst, and the moors of Penigent and Ingleborough, but the extent is not so great, nor are the peculiar phenomena so marked elsewhere as in the Causes.

In a lecture delivered at the International Exposition at Paris in 1889, M. Martel said:—

"This region of the Causes is a veritable novelty, and the most part of my audience has probably never before

heard them named. It is, in fact, only since 1879 that geographers have paid them any attention. Up to that date they were, if not totally, yet to a very large extent, unknown, and were certainly misunderstood. However



improbable this statement may seem, it is a fact, although this region is situated in the very centre of France.

"Now, thanks to the initiative of the French Alpine Club, the poor cantons of Quercy, of the Gévaudan, of the Rouergue, of Larzac, etc., imperatively call for attention; and in spite of fashion they are beginning to attract tourists by the hundreds to visit magnificent scenery, yesterday

unknown, to-morrow bound to become famous,—the gorges of the Tarn and of its affluents, of the Hérault and of the Vis; the rock-labyrinths of Montpellier-le-Vieux, of Rajol, etc.; the subterranean cascades of Bramabiau, the cave of Dargilan, etc.

“These cantons compose the curious country of the Causses, the calcareous plateaux. Here we find extraordinary valleys, as profound as they are wide, between precipices that measure 1500 feet in vertical height. The rocks are purple and the waters pellucid. There are more forests of rock-needles than of pines, and these natural obelisks have been hewn and sculptured by ancient deluges into astounding forms. Finally, one has to travel in boat on the tortuous rivers where the ravines are so contracted that no space is afforded for a road.

“But this is not all; the landscape is viewed under the gleaming sun of the South, is seen without effort; but this is the least original feature of the country. Look behind it all, into the bowels of the earth, and there you see a revelation of its greatest marvels. Far from the blue sky, these wonderful sights lay hidden in darkness, seen by few, explored incompletely, caves with immense stalactites, stretching for many miles into untraced subterranean rivers, unmapped underground lakes, walls clothed in the glittering veil of crystallisation, quite as beautiful as the more famous grottoes of Carinthia,—a hidden, sombre world, which at the gleam of the magnesium wire is transformed into a fairy palace, fantastic to visit, fascinating to discover.

“In a word, the whole of this country, so long despised, now stands forth as one pre-eminent in its natural marvels, and in its scientific, especially its prehistoric, curiosities.”

No visitor to the Causses can understand what he



A LIMESTONE PINNACLE ON THE JONTE.

sees without having grasped their geological structure. Geology is thought to be a tedious and dry study, yet what study is without its *pons asinorum*, on one side of which only the imbecile and the vulgar halt and are content. "Seeing they do not see, and hearing they do not understand." Whack! away with them to Monte Carlo; Les Causses is not for such as these.

In the region of Les Causses geology is made easy to beginners. Kind Mother Nature opens wide her story-book full of pictures, and shows us what will interest us, in the simplest manner, in the way most easy to grasp.



GEOLOGIC SECTION.

First of all, there are the eruptive rocks, granite and granulite; these come out in the Margeride, the Monts d'Aubrac, and the Aigoual.

Above the granite lies the schist. This is micaceous, and of the richest Indian red hue. It may be seen uplifted by the granite on the way from Florac to Meyrueis.

Above the schist lie the Silurian or Devonian beds, red sandstones, with basins of coal in them. These we come upon in the train from Rodez to Brive; but they have been removed from the top of the schist in the *cause* district of Lozère.

Above the red sandstone is the *lias*; in Lozère it lies directly upon the schist. The *lias* is at once detected by its horizontal beds, much fractured, of a calcareous nature, of a nasty dust colour, intermingled with layers of clay, bluish or black or yellow.

Above the lias, capping all, is the Dolomitic limestone, with a vertical cleavage.

Let us shake hands—we are over the bridge.

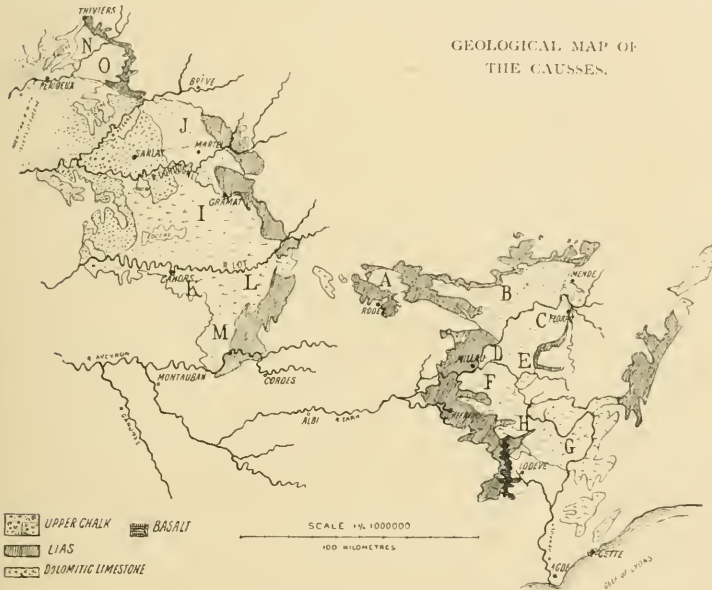
Now, immediately, we see one of the consequences of what we have acquired.

It is obvious that when water falls on the Dolomitic cap, it soaks in, and runs through the vertical clefts till it reaches the lias, where it encounters a formation that has horizontal beds, and some of those beds *impervious*. What happens? What would you do if you fell down a chimney? Would you not crawl out at the grate as soon as you reached the hearth-stone? The rain-water does the same; it bursts forth at the sides of the mountains in full-formed rivers. Where you see these, you know at once what is the explanation of their coming tumbling out of these orifices, laughing, bubbling, sparkling, full of music and brightness.

One of the most singular of these rivers is the L'Ouyse, formed of the drainage of the plateau of Gramat. It has two sources, very near each other, and constitutes a letter Y. Each source is so full, that a coal barge might be punted up the stream to its origin. The two streams unite within half a mile of their sources, and then run, a full, deep river, swarming with fish, for a distance of a couple of miles, till it falls over a wear into the Alzou, by a mill; and it is certainly, for its size, the shortest river in France, and indeed in Europe, excepting only those which drain the southern slopes of the Icelandic Vatna Yökull.

The sources of the L'Ouyse are not boisterous in ebullition, but dark, profound pools. It is otherwise with Bramabiau, and ten thousand other springs. At Padirac a subterranean river can be followed in a boat for two miles.

Some of these sources are intermittent. At Autoire one day I saw women washing linen in a copious torrent, much affected by them, because warm. Next day I passed the bed dryshod; not a drop was running. At Baladou are two perverse sources that take it in turn to spout.



- | | |
|-----------------------------|-------------------------|
| A Causse Central d'Aveyron. | J Causse de Gramat. |
| B " de Sauveterre. | J " " Martel. |
| C " Méjean. | K " " Cahors. |
| D " Noir. | L " " Limogne. |
| E " de Begon. | M " " Lalbenque. |
| F " " Larzac. | N Plateau de Négrondes. |
| G " " Blandas. | O " d'Excideuil. |
| H " " Campestre. | |

The Dolomitic limestone is held to be coral rock built up under water by the industrious insect that is at present forming reefs and islands in the Pacific. At the time when these tremendous masses were composed, the lias lay at the bottom of a warm, shallow sea, and on its banks the

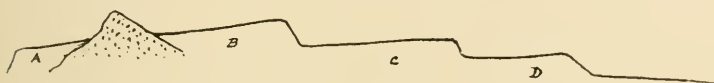
coral worm worked. Gradually the bottom of the sea sank, and as it sank, so gradually did the insect build upwards towards the light and warmth. After a lapse of ages the whole was upheaved, and the coral reefs were thrown high into the air to form mountains. Thus were created the Marmolatta in South Tyrol, and the Mädelser Gabel in the Algäi Alps, and the Causses of South Central France. As the construction was vertical, the structure is vertical; and as the coral insects twisted and turned about sponges, masses of seaweed, and avoided cold currents, the whole mass of rock abounds in hollows, in which water accumulates, and in passages through which rivers run.

The great stream of tourists or travellers follows the line of the Rhone to the Riviera, or that by Bordeaux to the Pyrenees, and all this district to which I wish to draw attention lies between these lines. Then, again, such as run to Toulouse from Brive, or to Béziers from Clermont, or from Figeac to Mont Sempron-Libos, do not perceive the desolation because the lines follow the rivers;¹ and in the valleys there is alluvial soil that is cultivated and is rich. In the department of Lozère alone these bald plateaux occupy 310,000 acres. In Aveyron, the Causse of Larzac extends over 120 square kilometres, or 75 square miles. In the department of Lot, the ancient Quercy, the Causses occupy the greater portion of its surface.

The Causses are actually arranged in three steps or stages. The lowest is that nearest the Atlantic, and is of chalk, with a layer of lias above it in places. This is D in the diagram. The second is the stage of Quercy (C),

¹ That from Brive to Figeac does climb the Causse de Gramat, however, so does that from Souillac to Cahors.

that attains an altitude of 1000 feet. This stage is more sterile than the lower platform of Dordogne. The third (B) abuts on the Cevennes, and is the highest of all. It attains an altitude of between 3300 and 4000 feet. To the east of the Cevennes the Jurassic limestone plateaux reappear (A) in Gard and Ardèche. The highest terrace is the most sterile and most arctic in winter.



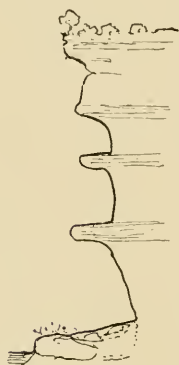
SECTION FROM THE RHONE VALLEY TO THE BAY OF BISCAY.

The lowest terrace of all, that of Périgord, is of the lower chalk with flints in it; not friable like the chalk of Dover, but compact and hard, and distinguishable from limestone only by its fossils, and by the flints embedded in it. The chalk Causse extend not only through the greater portion of Dordogne, but also into Tarn-et-Garonne, where the highest elevation attained is 900 feet. "The soil," says Joanne, "presents in general only stony plateaux, dry, barren, monotonous, with vines struggling from between stones, soils red and yellow, miserable coppice hardly clothing the nakedness of the hillsides. But though the plateaux are so desolate and sterile, the valleys are delightful, and often very fertile."

It is singular that the feldspathic clay or kaoline, the wash of the granite chains to the north and north-east, should lie, here in traces, there in pockets, on the surface of the equally white chalk, and that in sufficient quantities to be worth extracting for the porcelain factories.

A feature of great interest, as we shall presently see, is the horizontal lie of the chalk beds, and their variations in texture. After the deposition of a layer of peculiar hard-

ness, another ensued of a different quality, and this was again succeeded by the precipitation of a specially hard deposit. Consequently the face of a cliff reveals parallel strata, some soft, others hard. When the whole formation



WEATHERING OF A
CHALK CLIFF.

was elevated, it was split by upheaval, and sections were exposed to the action of the weather. Addison, in one of the papers in the *Spectator*, tells of a young school-miss who ate all the chalk that came in her way. Nature is that same chalk-eater. She is for ever nibbling at the tender beds that intervene between those which are hard. The consequence is, that the faces of the chalk cliffs in Périgord are furrowed horizontally with cavities at several elevations, running their whole length. It is just as though some giant had applied a parallel ruler to them, and had gone over them with a cheese-scoop, scraping horizontal lines one above another in their scarps.

Naturally enough, man in all ages has utilised these hollows. They are provided with a solid floor and a hard, dry roof, and the rock that lies between is so soft, that he can burrow into it at his pleasure. As the weather goes on gnawing inwards, it leaves so much projecting roof, that at last this, being unsupported, breaks away, falls down, and forms a mass of ruin at the foot.

A distinctive feature of the limestone Causses is the series of profound gorges through which the rivers flow. The course of the Lot is one full of noble scenery. Near its cradle it passes under the frowning Causses of Sauvette; then it cleaves the limestones of the Rouergue, and afterwards winds and writhes like a serpent through the

Causses of Quercy. Everywhere, at every stage, it affords surprises; the scenery is sublime and quaint. On both



LA LAUGERIE BASSE.

sides the cliffs are encrusted with castles and domestic habitations built half into the crags. Churches and towns

stand on the tops of the cliffs, and look down on the boats that glance by. In its sinuosities it washes overhanging scars, without leaving soil at their feet on which to plant a foot, whereas an alluvial meadow, rich and rank, is on the farther bank; then, suddenly, the capricious river turns to the opposite side, and treats it as it had the first; consequently, a road was only to be carried up the Lot valley by means of tunnels and bridges.

The statelier Dordogne, after leaving the granite chasms between Roquebrou and Gaignac,—chasms which nobody thinks of visiting, because ignored by the guide-books,—sweeps past the mediæval citadel of Castlenau le Bretenoux, and traverses a green plain bristling with poplars, between the Causse of Gramat and that of Martel. It passes under Taillefer's rock-castle at Gluges, and then ripples through a valley teeming with objects of interest. It sweeps under the rock of Fénelon, crowned by the restored castle of the great orator-archbishop, then gurgles below the tremendous Rock of Codon, 600 feet high, that overhangs. It is said in the country that the unlikely will happen what time as the Rock of Codon falls. On October 25, 1854, a great portion of this projecting beak was precipitated into the Dordogne;—it was the day of Balaclava. That same day the College of St. Joseph at Sarlat went out for a picnic, and the boys spread their tablecloth and consumed their meal beneath the shadow of the mighty rock. Five minutes after they had left, the mass fell, and carried away the road, and blocked the river. Further down is the marvellous town of La Roque, plastered against the face of a cliff, and Domme, occupying the plateau at the top of one wholly insulated.

The Dourdou passes through fine ravines, and receives the Sorgues, a fantastic, partly subterranean river. The

Aveyron sweeps through magnificent gorges, seen in glimpses only by the passengers in the train from Paris to Toulouse, which overleaps the tortuous river eighteen times. The Viaur, which falls into it, cleaves its way through a valley which is one of the marvels of France. Its medium width is 48 ft.; it is simply a chasm.

The cañon of the Tarn is fast acquiring an European celebrity. There is nothing comparable to it except in America and Asia. But the visitors who flock thither to descend from Ste. Enemie to Peyreleau, disembark there, and think they have seen all, and do not thread the tortuous gorges in which it is strangled when it enters the department which is called after it, gorges which extend to the fall of Sabo.

The Vis, the Jonte, the Hérault, the Ardèche also run through clefts of great beauty and savagery.

These chasms are the arteries, but the veins of water that feed them are mainly subterranean. But let us leave the valleys and reascend the plateaux. A noticeable feature to anyone crossing the upland plains is the number of saucer-like depressions in the surface. Into these basins the scanty soil, of the colour of ground coffee, has been washed, and these hollows are invariably converted into circular or oval fields that are laboriously tilled. Their origin is this. Beneath the surface existed at one time a vacuum, a cave; the upper crust has fallen in, and has left this pock-mark in the skin of the cause. But in certain cases the cavern has been so large in diameter, and so profound, that the crust has sunk bodily to a great depth, forming huge circular openings like lunar craters.

In some places, where the rock happens not to be porous, a stream flows along the surface till it reaches



A LIMESTONE CAÑON ON THE ARDÈCHE

a crack or a gulf, down which it immediately precipitates itself, and is lost. Where it emerges nobody knows.

Thus, on the Causse of Gramat two rivers, the Thémines and the Théminette, after a brief course drop out of sight. The Jonte dives underground below Meyrueis and re-emerges, after a short subterranean run. Near Rocamadour, a stream leaps down an abyss called the Maiden's Spring. The same occurs in the Grotte de Rêvillon. The sketch map of the district of Gramat on p. 39 will give an idea of the abundance of these holes in the ground.

These pot-holes, which vary in dimensions from that of a large-sized well to that of a volcanic crater, are locally called *avens*, *cloups*, *tindouls*, and *igues*. I shall devote a couple of chapters to them, and now pass on to other points of interest connected with the Causse.

Before the Revolution they were covered with trees. The enormous number of dolmens, *i.e.* prehistoric stone tombs, that still remain—and these are but a small fraction of those which formerly existed—testify that at a remote period these Caussees must have maintained a considerable population. But the well-built farmhouses, with their pigeonries like towers, the extensive outbuildings, dating all from the Renaissance, tell the same tale, that the prosperity and population of the Caussees were far greater formerly than they are at present. Moreover, again and again have I come upon the remains of walls and accumulations of stones collected from the ground for agricultural purposes, testifying to former cultivation, where now grow only a few juniper or box bushes. Wild vines also ramble at will where, beyond the recollection of present villagers, vineyards once existed; and now that phylloxera has destroyed the vines of the modern

peasant, he goes in search of cuttings from those that exist in the wilderness, where, five or six generations ago, thriving farmers collected and crushed their grapes.

The impoverishment of the entire limestone district is due to the ruthless denudation which followed on the Revolution.

The seigneurial forests were cut down and, as sheep were allowed to roam at liberty over the plains once well wooded, every seedling oak was cropped, and no young growth suffered to take the place of what had fallen.

Let us see what is the work of a tree and its function in the economy of nature, and thus we shall be able to measure the disaster that ensues on its destruction.

If any one will examine a section of soil and rock where exposed, he will observe, first of all, and uppermost, the *humus*, the ordinary mould, mostly composed of decayed vegetable matter. Below this is a friable combination of soil and stone, interpenetrated by roots; and below that again is the rock which has in it fractures. These fractures, great and small, are searched out and filled by the finest root-fibres. The tree root thus penetrates the natural joints of the rock, and breaks it up. It splits the rock into bits, and then, grasping these fragments, crushes them to grit. Thus it is continuously engaged in deepening the soil and reducing the rock. It does more. It throws down its leaves every year, and by their decay makes mould out of the rock the fibres have chewed. Moreover, the acid given out by the leaves exercises a powerful effect on the limestone, which it attacks and corrodes.

Thus, on a plateau like the *causee*, when well-wooded, there goes on a steady decomposition of the rock and accumulation of soil. But this is not all. The multi-

tudinous fibres of the root hold the soil together, and the protection of the trees enables myriads of most varied shrubs and herbs to grow on the ground, and all to combine with their delicate lacings of rootlet to keep the soil in place. A thunderstorm bursts over the mountain plain, its force is broken by the roof of leaves, and the water that falls through is entangled, divided, absorbed, and cannot form destructive torrents, sweeping away the earth that has been manufactured with such pains by the vegetation.

Now, the process of earth manufacture had been going on from the beginning of time. At the Revolution the woods were felled, and nature's laboratory brought to a standstill. In place of clothing and creating, denudation and destruction ensued. The soil was no longer protected by trees, nor held together by rootlets. With every storm it was carried away down into the depths of the *cloups* or into the river valleys, and more and more through the wasted flesh appeared the bald scalp of rock. The flesh was gone; only the bone remains. Moreover, no regeneration is possible so long as the Causse remain unplanted.

One hundred years has sufficed to sweep every particle of soil from the Causse which it took countless ages to accumulate; and land that once maintained a well-to-do population is reduced to a desert.

Upon the Rauhe Alb, a precisely similar district, though of much less extent, in Würtemberg, a wise and stable Government has provided hydraulic rams that throw up water upon the calcareous plain, and this not only serves to fertilise the soil, but to provide the inhabitants with potable water. But such a great work can only be performed by a Government strong enough to resist the

unintelligent opposition of the peasantry, who would object to the replanting as involving a curtailment of their rights of pasturage over a vast range of wilderness.

Finally, I would say a word relative to this district of limestone as one fit for winter quarters. It is now some years since, spinning down the line from the St. Gothard to Genoa, I passed under the limestone cliffs of Monte Genevra, at Mendrizio, that faced the sun, and seemed to cut off north and west and east winds. It then occurred to me that no better quarters could be desired for winter; and on the following winter I betook myself thither. But what did I discover? That the warmer shone the sun on these cliffs, the more rarefied became the air, and the more tremendous was the down-rush of cold air from the snows of Monte Genevra above, to fill the vacuum created by the ascending warm current.

Every visitor to the Riviera knows how cold is the blast that descends from the Maritime Alps, clad in snow. This is inevitable. As the air becomes warm it mounts, and the ice-cold blast comes in to take its place.

If, then, we desire an equable temperature for the winter, we must not seek a place where there is a cooler atmosphere over our heads, to send down a *douche* of ice-cold air upon us. We must look out for shelter indeed, but shelter without this disadvantage,—and this is what the region of the Causses affords. I do not recommend those of Lozère, for snow lies on the Cevennes, but those of Quercy, and, better still, of Périgord. There, by the river banks, we have cirques of rock 400 to 600 feet high, cutting off all winds, facing the sun, and concentrating its rays.

Moreover, the chalk and limestone absorb the rain at once, so that the atmosphere is dry, and bracing also.

At a time when means are dwindling and expenses are increasing, it is a consideration for a valetudinarian to find a cheap health resort. Now one can run by express, third class, to Brive or Périgueux, from Paris, for the moderate sum of 25 francs ; and one can live in any hotel for from 6 francs to 7.50 per diem. That again is a consideration for a good many. But that is not all.

It is essential to one who for his health has to expatriate himself in winter, to be able to find something to occupy his mind and engage his interest, and afford him at the same time plenty of exercise.

I doubt whether in any part of Europe, Italy only excepted, so vast and varied an amount of objects of interest is collected together as in the old Aquitaine. The weather there is usually good. One is rarely confined to the house by more than one day of rain. There is something fresh to be seen at every turn. The inns are not, unfortunately, as yet quite what might be desired, at all events in those villages which nestle into the warmest corners.

The cirques will some day, I believe, become health resorts. Such is that of Cabrerets, a very trap for sunshine. Les Eyzies on the Vézère is another, but the cliffs there are not so high.

The cirque of Autoire opens to the north, but the climate there is very mild. The little river rises on the Causse de Gramat, and plunges over a lip of rock in a fall of 100 feet sheer into a great cauldron of rocks rising 400 feet. The cliffs on all sides spout forth streams that steam in winter, being warmer than the air, and nourish dense masses of maidenhair fern. Taken all in all, the cirque of Autoire is not surpassed in beauty by anything on the Tarn.

Rocamadour occupies a perfectly sheltered nook, and is in a neighbourhood full of interest, and possesses several very comfortable inns.

At Salles-la-Source in Aveyron is a cirque accessible only through ravines that wind about in a way to cut off every wind. The town is like those of the Amorites, "walled up to heaven"; but the walls are not of man's construction. In walking to it from the station one May day I took the wrong turn, and traversed the *causse*. I could see the gorge below, I could look down on the roofs of the houses, I could smell the *déjeuner* cooking in the kitchens, but how to descend to those houses, and reach those *plats* I sniffed, puzzled me. That place was a frying-pan in May; it cannot be cold in winter.

Or take Beynac on the Dordogne. There is not, indeed, a cirque, but a face of rock crowned by a feudal castle, where, a week before Christmas I picked pinks and harebells, wallflowers and valerian, and found a Sunday school sitting outside the church, being catechised in the sun, amidst the buzzing of green-backed flies.

CHAPTER II

THE UNDERGROUND WORLD

M. Martel the Columbus of the Underworld—Resemblance between the Structure of the Natural Caves in the Causses and the Catacombs of Rome—Padirac—Descent of Padirac by M. Martel—Other Gulfs on the Causse de Gramat—The Gouffre de Révillon—The Roque de Corn—Bèdes—La Vitarelle—The Formation of Gulfs—Suicides in the *Arens*—The *Igues*—Gulfs in Ardèche—Vigne-close—Cave of Dargilan in Lozère—Bramabiau—Similar Caves everywhere in Dolomitic and Jurassic Limestone.

THE *arens*, or pot-holes, and the labyrinthine passages to which some of them give access are far too interesting a feature of the Causses to be dismissed in a quarter of a chapter.

These have had the good fortune to have been explored by a very Columbus of the nether world, M. E. A. Martel, with an enthusiasm and a courage altogether admirable. For my own part, I am like Nero, who, when advised to enter a tunnel in a sand-pit, to escape his pursuers, replied, "No, thank you; I do not desire to go underground before my proper time."

My cousin, Mr. George Young, who has visited the Causses with me, has more zest for such expeditions than myself, but his experiences are limited to the examination of La Crouzate, and shall be given in the subsequent chapter.



PADIRAC.

In my appendix I supply references to M. Martel's studies of the world below the surface; all that I can pretend to do is to sum up the result of his discoveries, and condense the record of some of his exploits.

I know that on one occasion, being invited to descend at the end of a rope into some unknown depth, I suddenly recalled that I had left bills unpaid at home, and thought it more just to my creditors to remain above the surface till I had cleared off all accounts against me. I have hovered around the mouths of many of these holes, but have only entered such as were warranted safe.

Any visitor to Rome who has been through the Catacombs will remember that the galleries are at several levels, that they are lighted by *luminaria*, and that they communicate one with another by drops. Now the Causses of Languedoc and Quercy are natural catacombs, resembling those that are artificial in many particulars. In both are galleries, at various levels, in both halls; the *avens* of the natural cave correspond to the *luminare* of the catacomb.

They resemble in another particular also, in that they are the cemeteries of men and beasts that have lived in a past age, not as at Rome at one period only, but from a primeval, a hoar antiquity. To give the reader some idea of the interest attaching to these subterranean abysses, I will condense M. Martel's account of his second exploration of Padirac, a typical cavern in this region of caverns. Padirac lies somewhat east of Rocamadour, on the great Causse of Gramat, about 780 feet above the bed of the Dordogne, which is not many miles distant. It opens in an arid desert, a *glèbe*, as the natives call one of these limestone floors that support only here and there a scanty growth of grass in spring under assiduous rain. The well-

hole mouth is 105 feet in diameter. The bottom can be discerned when the eye has accustomed itself to looking down the gulf, but at the bottom certain lateral openings are also distinguishable, apparently leading farther down into unknown depths.

The pit has not perpendicular sides; it forms a hollow cone measuring 195 feet at the bottom, which is at a depth of 225 feet. In the midst is a heap of rubbish fallen from above, rising 135 feet from the original bottom, which it conceals, and beneath which heap the stream percolates that traverses the entire length of the cave.

The gulf of Padirac is nothing other than the falling in of the roof of one vast cavern chamber. On reaching the bottom, the stream is seen gushing out from a side gallery that can be traced to its source 72 feet distant. This stream passes through the mass of débris that obstructs the centre of the great hall, and issues from below it at a little distance, and flows away through another gallery.

In 1889 M. Martel made his first descent into Padirac by a rope ladder. When he had reached the bottom of the natural well, he looked up. "The impression was fantastic; one might have imagined oneself at the bottom of a telescope, looking up at a patch of blue sky. The vertical light, strangely sifted, almost violet, illumined the walls of the well with reflections; these walls were hewn precipitously or in corbelled projections, joined by the calcareous stratification, one bed overlying the other. Above appeared the tiny heads of my companions, who were lying flat on the ground watching me. At the mouth and from every rib of this colossal funnel drooped streamers of plants that love the gloom and moisture, as clematis, ferns, scolopendria, etc. A botanist would have made a rich harvest in this medley of verdure."



THE LATERAL PASSAGE, PADIRAC.

On this occasion M. Martel spent twenty-three hours underground, exploring the subterranean river he discovered, and the marvellous halls hung with stalactite that opened out of the passage through which it flowed.

This expedition was the prelude to another made in 1890. He descended at 2 P.M. on September 9.

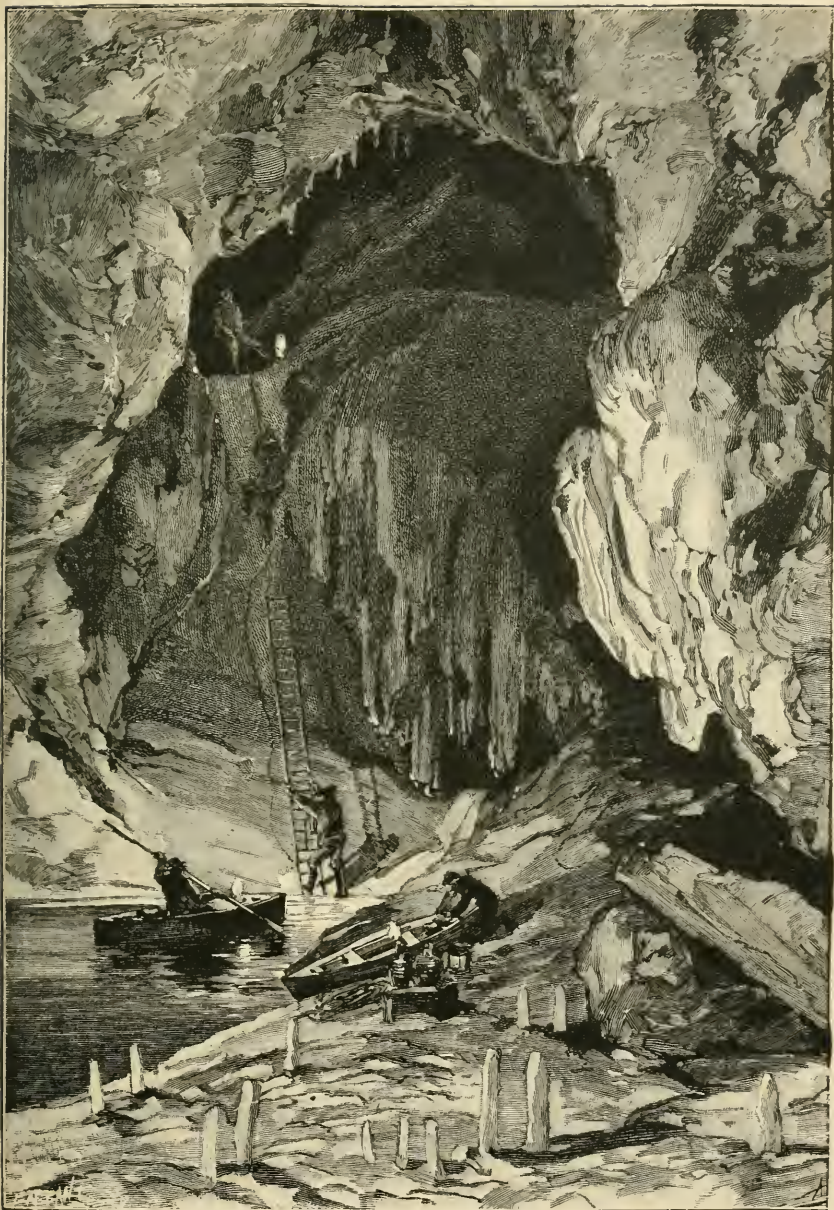
"The weather was magnificent, water everywhere very low, after a long drought, and everything promised success. We had with us 186 feet of rope ladder, three boats, two photographic apparatuses, and an electric lamp; in a word, the most perfect *matériel* to ensure success. Our programme was to pass a night underground, since at least twelve hours were requisite to accomplish the complete exploration.

"At 7.30 MM. Pons and de Jaubert, who had accompanied us to the bottom of the well, ascended, or rather were hauled, to the surface of the soil. It was dark already, and it was by magnesium light that this manœuvre was executed, a manœuvre rendered complicated by the cords of the ladder becoming entangled.

"At 8 o'clock, delighted to be alone, we began our real work, unembarrassed by the presence of the curious. A look upwards revealed to us the starry sky like a ceiling set with golden nails. Four watchmen were to pass the night at the edge of the cave, near the telephone, which I had just laid out.

"At 9.30 we dined solidly and merrily, and then gave ourselves an hour for repose, which had become necessary.

"At 12.45 the three boats started, De Launcey and I in an 'Osgood portable folding canoe,' which we called the *Cayman*; Gaupillat and Foulquier in another of the same construction we called the *Alligator*; Armand alone in a little boat of another description, more solid than the



LAC DES GOURS.

Osgood canoes, and destined to secure a retreat should the canvas sides of the other boats be torn.

"The departure was indeed majestic. The little illuminated flotilla produced a striking effect on the subterranean river, the colossal vault above illumined by the electric light and magnesium. After a course without much difficulty for 1275 feet, a series of lakes was entered, separated from one another by stalagmitic ribs, and the boats had to be lifted over these, and to be carried to a lower level. Then, between two stalagmitic rectilineal columns about 60 feet high, the river sped away into utter blackness. Was it possible for us to follow its course? The *Cayman* was the first to make the attempt; it is somewhat compressible; with both our hands each of us thrust at the wall; the membranes of our boat groaned, the canvas grated, but we succeeded in squeezing through. The others followed. The chasm is lofty and narrow,—not more than 3 feet wide, like the passages in the Great Pyramid of Egypt. Let me add that the chandeliers of stalactite, the calcareous arabesques, the black water, the flashes of reflected light, produced a strange effect. The walls were straight, smooth, without banks or shelves on which to disembark."

Having reached the point which M. Martel calls the Lac des Gours, the whole party left their boats at the foot of a steep incline which seemed to lead to another passage. The slope was escaladed, and discovered to be the stalagmitic overflow of a lake at a higher level in a large hall.

"From this point the *coup d'œil* is fairy-like. The dyke and the lake constitute the floor of the largest hall of Padirac; the vault springs up in dome form some 120 or 150 feet above our heads, some 210 or 240 feet above the Lac des Gours, on which we could distinguish,

far down at the bottom of the long slope, our three boats and the flash of the electric lamps we had left there. This superposition of two lakes under one vast cupola glittering with stalactites is sublime. The light smoke of our magnesium rises in spirals, and dissipates before reaching the vault. The delicacy of the circumvolutions of the incrustation holding in the upper lake is remarkable.

"This concretion recalls the calcareous terraces of the Mammoth Springs in the Yellowstone region.

"It was 2.20 A.M., and we could remain there no longer. We had to push on, as we did not know when we would leave the cave."

M. Martel continued the course of the subterranean river. The difficulty of proceeding was considerable, owing to the ridges of stalagmite dividing the river course into basins. Of these as many as thirty-four had to be passed, and then M. Martel had reached the final point attained by him on a descent made the previous year.

"We came to the thirty-fifth ridge, then to a little incline, where we rested for a few moments. We were pretty well tired out, wet through, and at two kilometres from the place of embarkation. The boats were very heavy. The thirty-sixth ridge was of clay, like an ass's back. When I set my foot on it, I slipped and fell into the water up to my neck. I could feel no bottom. I laid hold of the yielding clay, but my brother-in-law drew me out. I was not more wet than I had been, for the vaults drip, and we had been soaked for some time.

"The flotilla pushed on with difficulty. Then, suddenly, the river disappeared, probably down some fissure, but the gallery continues dry, with a gravelly floor. We disembarked and walked along this passage for 600 feet,

and came on water again—the eleventh lake. Fagged out, we flung ourselves on the ground, and called the lake ‘Le Lac du Découragement.’ It seemed wide, and its extent considerable.

“It was now 6.15 A.M.; we gave ourselves some rest, plucked up heart, and pushed forward. The change of direction, the different aspect of the soil, the absence of all current, made us hope we were near the end.

“Armand and Foulquier went back after one of the boats, and on its arrival I got in along with Armand. The lake is 300 feet long, and the vault is hung with magnificent stalactites. A contraction, then a twelfth lake, 180 feet long, at the end a sandy beach; the vault lowers a little farther, and then comes a *cul-de-sac*. We looked for a crack, an opening of any sort, and found none. We had reached the extreme end of Padirac. The hour was 6.45 A.M.”

It took three hours to get back to the point of embarkation. Then time was spent in measuring and in photographing.

“At 2 P.M. we breakfasted. We had eaten nothing for sixteen hours,—since 10 o'clock the previous evening, but we suffered from cold and our stooping position, rather than from hunger. At the Fountain we underwent a strange sensation. In the little lake which it forms as it wells from under the great cone of *débris*, we perceived a pale light like a lamp at the bottom of the water. The appearance was so singular as to puzzle us for some moments, till we discovered that it was the feeble ray of day falling 310 feet down the great gulf and the sinuosities of the successive minor wells. However pale and feeble this luminous ray might be, like a moonbeam glinting through a keyhole, it gave us so

much pleasure that we extinguished our lights to observe it the better.



THE NARROWS, PADIRAC.

“Then, when we had reached the bottom of the great gulf, we had still 240 feet to ascend by rope ladder; the

escalade of the Puits du Gour had nearly finished our strength, but the view of blue sky after twenty-three hours of darkness in these caverns, the sound of voices calling from above, reanimated us, and at 4 P.M. we were once more above ground."

The subterranean river of Padirac possesses a very peculiar and interesting feature, in that it consists of a series of reservoirs separated from each other by thin partitions of stalagmite, and these have to be completely filled before any overflow can take place.

The spot where the waters of Padirac reach the surface is probably at Gintrac, in the valley of the Dordogne, where it issues from the cleft above the impermeable clays, under the upper lias, about two and a half kilometres from the point at which the subterranean course ceases to be traced.

Since the exploration by M. Martel a speculator has *bought the hole*, and hopes to make the cave accessible, and pick up a little revenue from it.

The Causse de Gramat differs in one respect from those of Lozère in that on it certain streams do flow for a portion of their course over the hard surface till they reach fractures where they are swallowed up. Of these there are six,—the Cazelle, which disappears in the gulf of the Roque de Corn; the Salgues, which plunges down the tunnel of Révillon; the Rignac, which dives underground at the Saut de la Pucelle. These are to the north-east of Gramat. To the south-east are the Thémines, the Théminette, and the Assier river.

Révillon is a fine picturesque cave, in the face of a precipice which yawns to receive the stream of the Salgues, that leaps into it in a waterfall, glides over a sloping floor, and then disappears down a sombre tunnel. The

great entrance hall receives abundance of light ; trees and shrubs surround it. The tunnel can be explored with lights to the length of 1140 feet ; it inclines to a depth of 180 feet, and is without these awful sudden drops of a hundred feet and more that are a little trying to the nerves of an inexperienced explorer.



SKETCH MAP OF THE CAUSSE OF GRAMAT.

~ Pot-holes, π Dolmens.

La Roque de Corn is another of these gulfs, close to the line, half-way between the station of Rocamadour and Montvalent. This is like a lunar crater. It is bigger than Padirac (210 feet), but not so deep, and it is quite possible to descend into it by clinging to the bushes and going down from ledge to ledge. When the bottom is reached, the sides surrounding one seem to rise sheer to the blue sky above. Indeed, it is much like being at the

bottom of a great ribbed stone barrel. The shepherds are accustomed to drive down their goats, as grass springs on the floor below, and it is with some surprise that one finds



DESCENDING A POT-HOLE.

one's self, on landing at the lowest level, in the midst of an importunate herd demanding crumbs of salt. At the east side of this cask is a fissure that swallows up the waters of the stream that spills down the side. The

tunnel cannot be penetrated beyond 1200 feet, where the stream feeds a lake that fills the termination of the passage.

Another of these sunken hooped barrels near Gramat is Bèdes, twice as deep as the Roque de Corn (185 feet), and four or five times as large. What is singular about this is, that half-way down the side are the remains of troglodyte habitations, a cave walled up in front, accessible only with difficulty.



LA VITARELLE.

Another of these craters is close to the line, Les Besaces, a double abyss. A little farther is the huge *aven* of La Vitarelle, which is 210 feet deep. This also can be descended on one side by a crack in its harelip filled with loose stones and bushes. I, even I, descended this, sustaining myself by my umbrella, and arrived at the base with my umbrella divested of all its silk—a skeleton. Bramble and thorn-bushes retained its fluttering remains as testimonies whither I had gone.

It is related that a witch, or an oracular spirit, dwells in this gulf, and answers questions that are shouted down it. On a certain day, when a certain person was below, two peasant girls came to the brink to ask their fortunes. Replies were promptly called from below, and this person in the depths, having a playful wit, gave them very astonishing prognostications. The maidens were somewhat staggered, and after a pause of mingled alarm and surprise, timidly put a test question: "La Vitarelle, if you speak the truth, and are no spirit of hell, answer truly, who are we?"

"A pair of young donkeys!" replied the voice from below.

These *avens* or pot-holes are of very ancient date; it is possible that some of them were formed at the period when the *diluvium*—that sounds better than the Deluge—washed over these lofty plateaux and strewed them with rolled stones from the mountains of Auvergne. We can imagine the crashing in of the vaults under the weight of water, and its thundering down into the chasms as they gaped.

But similar gulfs open even now. In 1891 a violent storm broke over the *causse*, and its worst downpour was at Cayrouse, near Reilhac. Here were many cup-like depressions, from 18 to 20 feet deep, with soil at the bottom, and cultivated as fields. These were filled to the brim with water. All at once, with a gurgle, the water fell in one of them, as though rushing down a funnel, to the consternation of the peasant who owned it. When all the water was gulped down, he discovered that his pleasant little field of coffee-coloured earth had disappeared wholly, and that in its place yawned a pot-hole. The same storm produced similar effects in three other places.



DESCENT OF AN *AVEN*.

The *avens* or the labyrinthine passages underground on the Causse de Gramat can well be visited and explored from Gramat itself, where I can recommend the Hôtel de l'Europe, kept by M. Bergounoux, the worthy Mayor, a man of no ordinary intelligence; and for a guide, the trusty, modest Alibert Gentil, at Gramat, a man who will not attempt to impose on a stranger, and who will faithfully and carefully ensure all that is necessary for a safe descent into the most dangerous pot-holes.

Padirac, Révillon, Bèdes, La Vitarelle, are large open craters; but others, the *igues*, are smaller at the mouth, quite as profound, and sometimes much deeper. These are wells, but wells without water. The *igue* of Barrières, between the Roque de Corn and Padirac, goes down abruptly 94 feet, whence continues a gallery; the *igue* de Gibert is south of the Alzou, between Gramat and Rocamadour. The mouth measures about 25 feet in diameter, there is an abrupt descent of 75 feet, to a cone of rubbish, then a gallery 120 feet long; if followed, it is found to be blocked with fallen masses of rock. But another passage runs 300 feet till it arrives at a stoppage of liassic clay. The *igue* near Carluçet is 195 feet deep. In 1890 a poacher, who had murdered a gamekeeper, threw himself down in an access of despair. Two days after, someone passing the mouth heard cries. The man was withdrawn, actually uninjured by his fall, and he was sent to expiate his offence in New Caledonia.

A few winters ago a young peasantess near Reilhac disappeared. She was a married woman with two children; since the birth of the last she had been strange in her manner.

It was surmised that she had committed suicide. Now, on the *causse*, those weary of life do not drown them-

selves, as there is not water there sufficient to smother a cat. They throw themselves down the pot-holes.

After a few days, the *sabots* of the poor woman were found at the edge of one of these abysses. A young man volunteered to descend in search of the lost woman. A



BELOW !

triangle of poles was erected over the gulf, and he was let down a sheer descent of 170 feet. At the bottom of this natural well he found the corpse in the attitude of one leaning against the wall, with her right hand to her head, the other in her lap. The face was raised, and the light fell on it from above.

A rope was fastened to the body and it was hauled up, the young man staying it, as it ascended, from swinging against the sides.

All the neighbourhood was assembled at the pit mouth, and when the corpse appeared, the scene that ensued baffles description. The excitable peasantry were greatly moved, women screamed and fainted, and the unfortunate husband could hardly be restrained from sharing his wife's fate.

Suicides in these gulfs are by no means uncommon. One took place in Padirac some years ago. M. Martel recovered the body of a man who had destroyed himself in Bramabiau. Verily, a man must find life very hateful to finish it in one of these horrible abysses.

At Marcillac is an extensive cavern that has long been known. It was commemorated in Latin verse in 1578, in a little volume entitled *Peplus Italiæ*, dedicated to the Bishop of Cahors. One of the most renowned is that of Miremont in Dordogne. It has been so long in honour, and has received so many visits, that the stalactites have lost their beauty, they are smoked or broken. It is of great length. The galleries measure in all 12,700 feet.

None of the *tindouls*, *igues*, or *avens* in Lot, or even in Lozère, attain the astonishing dimensions of some of those in Ardèche and Vaucluse. In Ardèche there are four great abysses in the plateau of Saint-Ramèze. One of these, the *aven* of Vigne-close, measures 570 feet in depth, and is in five stages. The descent is dangerous, and occupied M. Martel three days. Each well is in the shape of a bottle, and each opens out of the other by a narrow orifice and short passage at an incline, and the incline is so rapid as to be eminently dangerous; it is not easy for those who hold the ropes whilst lowering

a companion to maintain their footing on the steep slope. Moreover, there is always danger of dislodging a stone and sending it down on those who are already below. On the occasion of M. Martel's descent in 1892, an accident of this nature very nearly occurred. One of the party, whilst descending the first well, let go his lamp, which shot down 125 feet on the six men who were balancing themselves at the bottom on the edge of the second abyss, that gaped to a depth of 300 feet below. The cry of dismay uttered by the pendent man happily forewarned them; they threw themselves back against the rock. The lamp fell so close to one fellow as to strike the candle out of his hand.

On my penultimate visit to Reilhac, my friend M. Raymond Pons was suffering from cuts and contusions received in this way whilst descending a well in the bowels of the earth. A piece of rock had given way under the foot of the foremost man who held the rope by which he was being lowered, and almost killed him when suspended in mid-depth.

In Lozère there are *avens* and caverns of all descriptions, and on a great scale. The most famous is that of Dargilan, which was discovered in 1880, and is still in its full virginal splendour of stalagmite and stalactite. A shepherd discovered it by seeing a fox take refuge in a small hole. He cleared the mouth and found to his amazement that he had opened the door into a fairy world.

It was then partially explored, and was exhaustively so in 1888, by the indefatigable M. Martel. It engaged him for five days. I will not attempt a description of the several halls, and organs, waterfalls of stalagmite, statues, etc. Descriptions of stalactitic caves are as unsatisfactory

as those of waterfalls. Both must be seen, and neither committed to paper. Quite otherwise is it with Bramabiau, which is a cave of a most instructive description, and not one of glittering incrustations.

Bramabiau is in the department of Gard, but it is only 8 kilometres from Meyrueis, so that it can be visited from the same headquarters as Dargilan.

The plain of Camprieu, 3000 feet above the sea, was anciently the bottom of a lake that was fed by a rivulet which flowed from the granitic and schistous Aigoual. It was retained by a barrier of limestone on the west, and spilled over the edge in a series of cataracts into the valley of the Burezon. But in that barrier was a weak joint, and the water found it out, and gradually bored itself a way through the restrictive wall; then all at once the water spurted forth, and the lake was drained. This natural tunnel can be followed throughout; not indeed without difficulty, and that only when the stream of the Bonheur, which threads it, is low. The first hall or cavern entered by the stream has lost its crown, it has fallen in, and the mass of ruin has to be scrambled over before the brook can be reached again, where it dives under the rock.

"On the 28th of June 1888," writes M. Martel, "we traversed the upper corridor, which is from 215 to 240 feet long, and is easily accessible. We observed that about half-way through the tunnel that follows, a portion of the Bonheur is engulfed at a low, impracticable fissure. In the large square chamber that now bends to the south, 180 feet long and 45 feet wide, there are five parallel rifts which constitute the veritable *avens*. In the first the water disappeared that day, and it is the place of the second engulfment of the Bonheur; the other three serve to carry

off the superfluous water in times of flood, as we judged by the gravel and leaves that formed their beds. We were able to traverse all three. These five fissures are at an inclination so rapid that they can only be descended by ropes or ladders. They converge on a hall of a triangular form, each side about 90 feet, and perhaps 150 feet high. Two galleries open into the hall, but both end in a *cul-de-sac*. Under the rock and rubbish fallen from above we could hear the murmur of the Bonheur, occupied in changing her name to Bramabiau. The course of the stream is still hidden in a conduit parallel to the passage as it continues, and which leads at a rapid slope to a little lake. Here there would be nothing for it but to swim, if it were not for the capricious existence at the side of a gallery in the shape of a Y, which conveys the waters of three springs into the lake, and by means of which one can skirt the sheet of water.

“Beyond this we reached a hall where the river ceases to flow under encumbrances and blockage; here it enters and fills completely a tunnel. To avoid repetition, I will say nothing more of the magic effect of the magnesium light under these vaults lofty as Gothic naves; I will only ask the reader to imagine our little party, deafened by the roar of the water, in profound night, with feebly twinkling tapers, scattered about the grotto seeking for fissures, communicating by whistles, cords stretched and ladders hanging over abrupt ledges, our shadows magnified on the walls or on the foaming river, under cupolas 150 feet high, or at the end of avenues 300 feet long.

“We had to advance in the water. This we did for about 90 feet, and then heard the roar of a cascade, and presently we saw a stream thundering down on our right from a side gallery. At the confluence the river was,

of course, much swelled. We were constrained to dive under this cascade, in a manner neither graceful nor comfortable.

"From this point our progress was naught but a series of gymnastic exercises, through passages varying from 3 feet to 9 feet in width, along ledges, and round rocky buttresses, through deep and shallow water; sometimes with legs and arms extended we scrambled along above the torrent, working ourselves forward by means of the walls, or else we sidled along, clinging to the side with our fingers glued as it were to the wall, or else again we waded to the breast in the water. The frequent extinction of the candles, the difficulty of communication, of hearing in the din of the boiling water, all helped to increase the material difficulties we had to encounter.

"A great lateral pocket about 120 feet deep happily allowed us to halt. Almost in front, but a little farther down, a spout of water rushed out of the side through a hole in the wall; whence it came we could not conjecture. Then we reached an expansion of the gallery filled with a little lake, which we skirted on a cornice. Before us a black cavity announced a continuation of the channel; but the gallery was here over 6 feet wide, and the opening was higher than our cornice; if we leaped to reach it and failed, we would fall back either on the rock or into the water. Then Blanc threw himself, arms extended, across the torrent, and fell with his expanded hands against the wall opposite, just below the hole; but as, in spite of his height, he was unable to reach the entrance by this means, I took hold of his ankles, and held him over the edge, whilst he worked himself up, with rigid knees, till he could seize the lip of the cavity, secure his position, and give me a hand to help me over. How it was we did



IN BRAMABIAU.

not fall into the black rushing stream below in executing this manœuvre is more than I can understand.

“Our energy now began to relax. We had traversed 600 feet, and had taken an hour and a half over it, and in the event of our being unable to make an exit at the mouth, we must reserve our force for beating a retreat. A little farther on, and we heard the thunder of another cascade.”

M. Martel had now reached a point which he had attained the day before when making the reverse attempt; it was the sixth cascade from where the river emerged into the light of day. Thence the descent was in the river or along ledges above it—now down inclines, then down abrupt falls. At last, at one o'clock, streaming with water, burning as in a fever, the little party of adventurers came out of the chasm whence the stream bursts into daylight.

There are other districts in Europe also riddled with caverns. Where the formation is limestone, it naturally lends itself to produce similar phenomena. It is so in the Karst, in the limestone of the Jurassic period in Germany, in Yorkshire, and in Ireland. In Yorkshire, the caves of Kirkdale, and of the Greta, which sinks and flows underground, are familiar instances. Less familiar are those of Ireland. There, a subterranean river runs from Lough Mask to Lough Corrib.

Nevertheless, I doubt whether anywhere in Europe we have such a multitude of these caves, pot-holes, and sunken streams as in the Causses of Languedoc and Quercy.

CHAPTER III

LA CROUZATE

Caves used as Refuges in the Reign of Terror—To Priests—M. Arnal—To the Baron de Montesquieu—The Cave of La Crouzate—Descent by Mr. Young and M. Pons—The Crane for Lowering—The Last Abyss—The Twelve Skeletons—Malpial—Black Pottery—The Cave at Reilhac.

THAT the caves which honeycomb the whole country should have served as refuges at all times of war and persecution, and have been utilised as haunts for bandits and outlaws, is what might have been expected.

At the time of the Terror many of the nobles and clergy dived underground, and so escaped *la lanterne* and the guillotine.

At the extremity of the cliff of the Rou-Rouge, on the Tarn, near Bougané, is a cave which was the place of refuge of a priest, M. Arnal, at the breaking out of the Terror. He was *curé* of St. Pierre-des-Tripiers. The cave is about 25 feet deep, and the mouth 300 feet above the valley bottom, and 90 feet below the top of the *causse*. It is low and damp, and difficult of access. Nevertheless, the priest occupied it for many months, and spent his time in weaving baskets. On Sundays he stole forth. At a signal the faithful assembled, sometimes in a ruined chapel, at

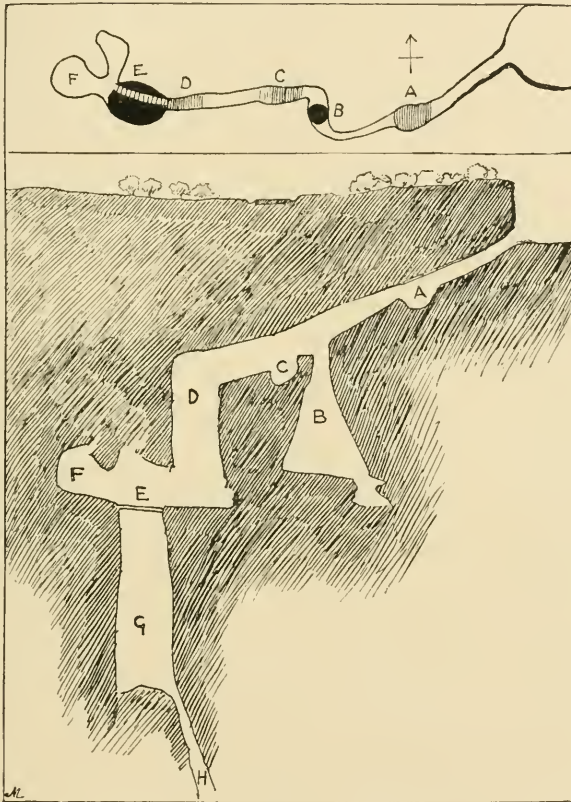
others in a grotto, to hear mass and be given a few words of exhortation.

One day M. Arnal hung out his cloak in the sun to dry, after a night spent in visiting a dying man in a down-pour of rain. It was observed by a band of *sans-culottes*, who at once went in search, suspecting that they had found the hiding-place of one of the proscribed. The priest, observing that men were on his track, withdrew his cloak, and the searchers would not have discovered his den among the many holes and fissures, had not a traitor in the place, named Caussignac, consented to lead them to the spot. The poor priest was taken, conveyed to Mende, and there shot. The firing was so carelessly done that his legs and arms were riddled and broken, but no vital spot was struck. Then the treacherous peasant who had betrayed him loaded a gun, and, standing over him, shot him through the heart.

Not far from the cave where M. Arnal was hid, eight priests remained in another throughout the Terror; the peasants let down food to them in a basket, by a rope.

On the Tarn, near the ruined castle of Montesquieu, is La Grotte des Proscrits, in which the baron, his wife, and three grandchildren remained in concealment during the same period. The baroness was blind, and over seventy. A shepherd supplied them with necessities. On an alarm, they migrated to another grotto, farther down the river, called La Grotte de la Momie, from a stalagmitic figure in it like a corpse wound up in cerecloths, and which is only accessible by boat or a ladder. In this place of retreat the five proscribed remained for nine months, and only left it when danger was over. Stripped of all their possessions, the noble family was absolutely destitute. The peasants of La Malène raised a subscription to assist

their former feudal lord, a little money was obtained by other means, and a portion of the ancestral property was repurchased. The baroness died at the age of ninety.



PLAN AND SECTION OF LA CROUZATE.

- A. Small hollow. B. Oubliette. C. Another small hollow.
 D. Great well. E. Bridge. F. Chamber. G. Last well.
 H. Descent to water.

By the side of the road from Gramat to Reilhac, on a stretch of the calcareous plateau, overgrown with juniper bushes, opens the cave of La Crouzate. It has nothing

remarkable in appearance to recommend it, as viewed at the mouth. There is a cup-like depression, and a small tunnel opening out of it, descending at a rapid incline under the highway, into the heart of the rock.

Nevertheless, this is one of the most instructive of caves in the Causse of Gramat, for it has obviously been inhabited at one time by a band of robbers, and that apparently for no brief period. As for the den into which Gil Blas was carried, it was nothing to this ghastly retreat, surrounded with pitfalls. When it was tenanted no one knows. History and tradition alike are mute. Only this is told by the peasants, that at one time their ancestors agreed to pay a poll-tax for every sheep and ox, so as to maintain a levée which should sweep the causse of the marauders who infested it.

After a descent for about 50 feet, a depression of about 12 feet is reached. We have attained a first and inconsiderable hall. We descend into this chamber, scramble up the farther side, and continue the inclined passage for another 70 feet. Then we come suddenly on the first pitfall. This is a domed chamber below the level of the gallery, with a hole in its centre in the floor of the passage. The vault is 50 feet deep, and is a veritable oubliette. He who drops in can never climb out. The opening has to be traversed on a bridge of poles. Behind this hole the occupants of the cavern could maintain themselves in safety, if a watch were kept at it. But this did not satisfy their desire to be absolutely secure, and nature provided them with plenty of other means of protection.

I will give the rest of the account from the pen of my cousin, Mr. George Young, who descended La Crouzate with the assistance of Alibert Gentil. It has, moreover, been examined and planned by M. Martel, accompanied

by M. Raymond Pons, who has visited it independently as well.

“The long rubbly descent was, so to speak, the glacis of the brigands’ subterranean castle, a glacis that burrows into the rock instead of rising into the air. Here everything is inverted. The glacis runs steeply down to the curtain—a yawning precipice, and right and left, to continue my illustrative simile, are flanking towers, otherwise deep pits.

“The hole we have reached occupies the entire breadth of the passage, and is bridged by a rough pole only. The men walk across, steadying themselves against the wall with one hand, and appear to regard a wobbling polished pole as an adequate bridge. Those who disagree with them will do well to insist on someone seating himself at each end of the pole.

“Beyond, the narrow passage continues, and in Indian file we follow its windings,—a long line of dark figures between the limestone walls, which gleam pale in the murky orange glare of the candles, and fade into impenetrable gloom above, and into wavering shadow below.

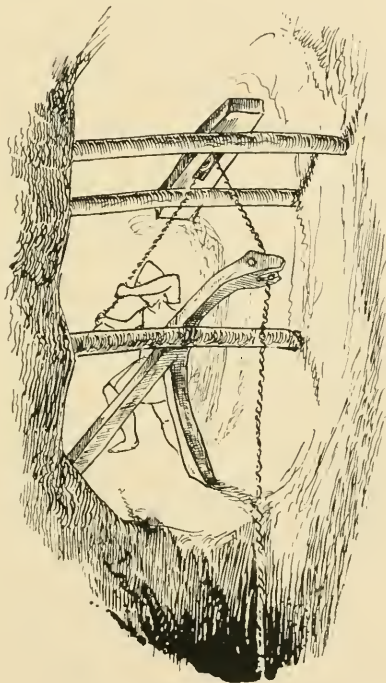
“Suddenly the line halts. The grey sides and floor of the passage break off at a sharp edge, clearly defined against the sombre abysses of a vast cavern. We have reached the main wall; and to get into the castle proper we shall have to descend this precipice. The process is simple enough. The rope is now brought into requisition. I am placed astride on a bar, and a scarf is looped round my shoulders and knotted to the rope at my chest. I am then told the code of signals—*Hai!* go on! *Ho!* stop! The men brace themselves against the rope. Someone pushes me gently over the edge, and I am descending into utter blackness of a vasty deep.

"The start is certainly the worst part: as you go over the edge, and your feet feel nothing underneath them, the impulse to check yourself is irresistible. You do so, and your weight being taken off, the bar works itself loose beneath you; you try to stop yourself, and it turns sideways, and seems disposed to slip between your legs. If it were to accomplish this, then there would be nothing to stop you from dropping down the well something like 90 feet, unless the scarf caught you round the neck. In despair you clutch the rope, which you have been distinctly forbidden to do, and find by experience the reason of this, for your hands are at once pinched under it and dragged over the rocks.

"*'Lazza! Lazza doucemang!'* says a voice in another world above, and you have learned some Langue d'Oc you are not likely to forget. *'Ho!'* you gasp, rather than shout, and you are granted a moment's reprieve to put your fastenings and ideas in order. *'Hai!'* and away you go again, legs and arms doing their best to fight clear of the projecting rocks, keep the bar in place and the candle alight, which latter, as you slither down, sprinkles you with scalding grease.

"In spite of your best efforts, a rock detains you long enough for the rope to get slack, so that, on getting clear, you shoot down some 3 or 5 feet, and then the rock hollows out, and you swing clear, spinning like a teetotum, and come down with a clump on a pile of beams and rubbish. This pile of beams deserves observation; it had escaped the notice of MM. Martel and Pons when they first explored the cave. On this occasion M. Pons and I turned our attention to them, and soon discovered their purport. Very remarkable they were. In fact, they

were the remains of the lowering apparatus employed by the robbers who used the cave as their place of refuge. The apparatus consisted of a crane, forked at one end, with a rude pulley roller at the other, also of beams for supporting the crane, and other contrivances for facilitating the working of the rope by which the rogues ascended and descended. The whole contrivance was placed at the top of the abyss, and we found, when we got up again, the mortice holes cut in the living rock for the reception of the sustaining beams. The crane projected over the gulf, and swung those descending clear from the lip, and thus avoided the preliminary tobogganing, which, frequently repeated, would have proved too much even for the cast-iron nerves and tanned leather jerkins of a mediæval brigand.



CRANE IN LA CROUZATE.
(Restored to its place.)

“And what was the rope to which they hung as they went up and down in darkness? We found it—nothing but twisted clematis trailers.

“Leaving three men above, we are joined by the rest,

and the diminished party proceeds along another passage till we reach a sort of balcony occupying one corner of a low-roofed cave. The walls of this cave run sheer down on every side—in fact, we stand on the ledge of a well that actually descends 265 feet sheer. On the opposite side of this awful chasm is a steeply inclined slope, and leading to this, along the right-hand wall, a rough bridge of poles.”

Beyond this bridge, which may be crossed, for the poles are not completely rotten, is a steep rubbly slope that can be ascended, when a chamber or small cave is entered which probably served as a storeroom to the robbers who occupied the grotto of La Crouzate. M. Pons pretends that he saw therein traces of beds made of branches, but M. Martel, who has since entered the cave, saw nothing to justify this statement. At the same time, it is not to be doubted that for some purpose or other this innermost recess was frequently visited, if it were not actually the sleeping chamber of the bandits. The elaborate contrivance for descending to the foot of the bridge, the bridge itself over the well, point to this inner sanctuary as having been an important portion of the habitation of the occupants of this underground “castle.” I much regret that Mr. Young, in his desire to go to the bottom of the well that is bridged, forgot to explore the cave which served as the last refuge of the brigands, and where they were perfectly unassailable, and could be reduced to surrender only by starvation.

The bridge, as already said, is thrown across the well. This was descended by my cousin and M. Pons; but M. Pons had gone down before, and he has kindly furnished me with his account.

“It is not possible to get down this well by any other means than a rope, for the walls are vertical. Some

rocks project, and threaten to fall at a touch. I struck one with my foot, and it whizzed down with a sound that was really frightening. The men above, who held me suspended, were alarmed, and shouted, 'Are you alive?' I was some minutes without being able to answer them.

"Numerous bats whisking about touched my face with their leather wings; they really seemed as thick as a swarm of bees.

"Astride on my stout stick, I continued to descend. How grand it all was! Imagine a vast cylinder of crystal red as glowing iron. The facets glittering in the magnesium light had a grandiose effect. In my many descents into these *avens*, I have never seen one so encased in stalagmite, and here one seems to be descending through a hoop of fire. Although I said that the sides were perpendicular, this is not absolutely accurate, for there is an inclination of the well. After having descended half-way, I seated myself on a ledge in order to rest the men who were letting me down. Whilst seated there, I occupied myself with observing the walls of the gulf. One phenomenon struck me as very curious. In the coat of crystallised calcareous matter are a number of little holes as big as hazel nuts, in which live small red spiders with heads bigger than their bodies, who have spun webs in the form of suns to catch the flies which, white as snow, and with wings large out of all proportion to their bodies, flit dreamily about. I attempted to catch some of these flies, so as to preserve them in a paper cornet, but they were so delicate that they seemed to melt between one's fingers.

"At the depth of 80 feet I observed a hole as large as my fist. I put my hand in, when away rushed something with a noise like that made by a rat running over nuts. What it was, for the life of me I cannot tell."

My cousin also descended this well, whence M. Martel had formerly brought up the skull of an *Ursus spelæus*; and he found there large bones of oxen, and, sealed against the wall at the height of 10 feet from the bottom, the antler of a stag.

At the side of the well, at the bottom, is a farther descent, and water can be heard flowing at some distance farther down. Mr. Young attempted to crawl down, but the passage contracted, and he not only could get no farther, but experienced some difficulty in retracing his course backwards. Up this passage the water rises in times of flood, and mounts the great well to the height of from 10 to 12 feet. At one time it must have floated up the stag's head, and retained it in suspense till the antler was affixed to the side by stalagmite.

About thirty years ago, a M. Delpons, at one time *préfet* of the department of Lot, an enthusiastic antiquarian, living at Livernon, about five miles distant, observed a huge block of limestone reposing in a field beside the road to Reilhac, at only a little distance from La Crouzate; it lay under an ancient walnut tree. Believing it to be the capstone of a prehistoric tomb, he erected a triangle over it, and with chains succeeded in raising it, when beneath it he discovered twelve skeletons ranged in a circle, their feet inwards, and an iron chain which had apparently bound the twelve together.

Clearly these twelve men were malefactors who had been executed by the roadside near the scene of their crimes, and buried where they had been executed.

Thirty years later, in La Crouzate, the apparatus used by brigands is discovered. Is there a connection between these discoveries?

Not far from Gramat, at Malpial, is another cavern.

The descent into this is attended by no danger, but by some difficulty. There is a circular crater, and one has to creep between two layers of stratification, till a portion of rock has been attained which forms a series of natural steps, perhaps assisted by art. Then a lateral cave is seen which was anciently blocked by a wall of stone. Within is a rapid incline, strewn with great blocks purposely left there to make a descent laborious. After having gone down some distance the passage branches into two arms. On the left is a long extent of level tunnel, perfectly dry, the vault blackened with smoke, and the floor thick strewn with broken pottery. I collected many pieces and brought them to the light of day. They were all of one date and one character, the black pottery of the early iron age. The right-hand passage leads to water, not a spring, but a basin fed with drops from the roof. In times of drought the modern inhabitants of the neighbourhood descend into Malpial in quest of the precious fluid which can always there be found when failing elsewhere.

At Reilhac is a cave on the farm of a man named Rosignol, which was also closed with a wall. Finding that within were bones, which he thought might be useful as dressing for his field, he tore down the wall and excavated the grotto. It proved to have served as a dwelling for man from a remote period, and contained vast deposits of men's middens from the epoch of the reindeer, through that of the polished stone, to Gaulish times. Some pottery of the latter date, not black but red and ornamented, was recovered from it by M. Raymond Pons, who at my suggestion sent them to the British Museum as samples of the pottery of the later Gaulish period.

CHAPTER IV

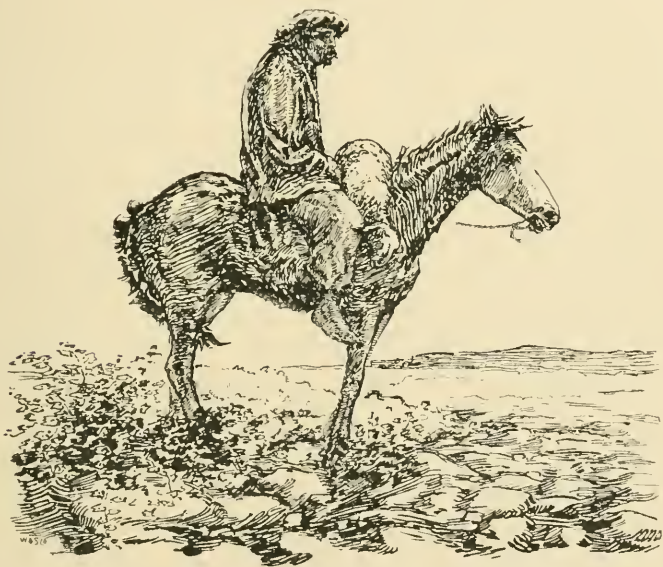
THE CAUSSENARDS

The Iberian Race—Customs remaining—The Maybush—The *Fougasse*—The *Paillade*—An Iron Cage for Scolds—Marriage Customs—Folk-Songs and Melodies—Small Holdings—The Social Hierarchy : in England ; destroyed in France—Subdivision of Properties in the Limousin—What becomes of the ruined Peasants?—The old Count of Beaumanoir—" *Mieux sera.*"

THE whole of Aquitania was unquestionably originally peopled by the Iberian race, of which perhaps the Basques, driven into the westernmost portion of the Pyrenees, are the sole remnants. Along with them was the Ligurian. This latter is a sallow, dark-haired, gentle race, but excitable and passionate. The Ligurians were subjugated by the fair-haired Gauls ; the Gallic conquerors remained as chiefs, but by no means constituted the bulk of the population. Then came the Romans, next the Visigoths. Consequently the population is of mixed origin, but the main mass is undoubtedly Iberian and Ligurian. The name Gascon is Basque—the B has become a V in Vascones, and then the V was changed into G. The Gascon character is proverbial. But Vasconia extended anciently to the Loire, and was not contracted to the foot of the Pyrenees till a later period. On the *causee*, on the most barren and thankless soil, lingered the conquered race, retreating before the conqueror who appropriated the

alluvial valleys. Probably the peasants who now throw down the dolmens that obstruct their ploughs, are the lineal descendants of the neolithic and bronze men who set up these stone monuments over their dead.

They have lost their language, and have adopted and altered that of their successive conquerors, first of the Gauls and then of the Romans. They now speak a



A CAUSSENARD.

dialect of the great Langue d'Oc, that varies very greatly in the several departments, nay, even differs in adjacent villages, and which is at the present time going through immense deterioration.

A few old customs linger on, but tend to disappear. Lovers still plant the Maybush before the doors of their mistresses, and adorn it with garlands, precisely as was

done in England, and is still done in Sweden and Norway and in parts of Germany.

If a girl has given offence to a young man, he will dress a tree before her door and hang it with horse-heads and bones. But this is an outrage that is never forgotten and forgiven, and is resented by the brothers.

On the festival of the patron saint, there is always a great gathering at the public-house. The young men go about uttering strange noises, like the neighing of horses, and carry round a cake which they call *fougasse*, and which is decorated with ribbons furnished by their mistresses. Often each commune has its own *fougasse* and its own colours. This is the banner about which all assemble, and dance to the sound of the hurdy-gurdy or pipe.

The dance most usually performed is *la Bourrée*. It consists in several cadenced movements of arms and legs, in advances and retreats, and in pirouettes.

The *Branlé* is another dance. The man and his partner stand face to face. The former advances, retires, leaps into the air, and executes all sorts of fantastic steps.

The *Récégado* is a sort of round dance. The dancers hold hands and turn in a ring, and at each step they alternately incline their bodies inwards, and give to their arms a vibratory movement as though sawing wood. The song sung to this dance is taken alternately by the young men and maidens.

After the ceremony of a marriage in church, the *nobi*, or groomsman, runs to the house to which the bride and bridegroom are coming, and fills a bowl with soup and puts a spoon in it, then advances to the door and awaits their arrival. At the doorstep, bride and bridegroom have to take the soup out of the same spoon, and wipe their

hands on the same napkin. Then wine is poured into the bowl along with the dregs of the broth, and this is called the *chabrot*, which both are expected to drink. This nauseous mixture is a favourite draught in this part of France, and is supposed to be particularly nourishing. It is taken at any time.

When the wedding feast is done, the groomsman offers his hand to the bride, and, followed by the bridegroom and the bridesmaid, they go in quest of an apple which has silver and gold coins stuck in it, and is placed in a large dish. This is carried round to all the guests, with a song—

“Voici la pomme d’amour,
Qu’a d’argent faut y en mettre ;
Voici la pomme d’argent,
Qui en amour y en mettrons.”

To which the guests respond, and drop their contributions into the dish.

Sometimes a glass is thrown down and broken after the marriage feast. At Jewish marriages an analogous custom exists, and in Greece, the priest, after the nuptial benediction, gives a cup to bride and bridegroom, and, after they have sipped from it, throws it down and shatters it.

When a woman has beaten her husband, an ass is fetched, and the husband is mounted on it, holding a distaff in his hand, with his face to the rear, and the tail of the ass in his hand as bridle; in this fashion he is promenaded through the parish. If the husband, expecting what will be done, goes off and hides himself, then the people lay hold of his nearest neighbour and treat him in the same manner. This punishment is entitled the *paillade*, because, if husband and all male neighbours have fled and hid themselves, the people content themselves with

dressing up a man of straw and promenading this about.

At the museum at Cahors is an iron cage in which scolding wives were enclosed and ducked. Wives who give tongue are still menaced with it. The Committee of the last Exposition at Paris asked to have it sent there to be exhibited ; but the authorities of the museum at Cahors represented that the even temporary disappearance of the cage might produce such an outburst on the part of the wives, that no husband could view its removal with equanimity.

A second marriage is regarded on the Causses with little approval, and provokes a charivari. At a wedding, the youths invited claim the right to carry off the garters of the bride. The husband usually makes provision beforehand of a supply of coloured ribbons, which are given to the lads in lieu of the garters, and are worn by them throughout the day in their buttonholes.

This used to be universal in England ; and I have myself seen the bridegroom distribute ribbons to save his bride's garters at a wedding in Yorkshire.

On the morrow of a wedding, all invited attend bride and bridegroom to church, where a mass is said for the repose of the souls of the ancestors of the husband, who, in the popular idea, have now become those of the bride.

A large number of folk-songs and carols exist, but they have nothing distinctive from those found all over France, from Brittany to Provence. Some few are identical with certain English folk ditties. As I was walking along the road from Souillac to Cahors one bright winter day, I heard a slightly inebriated peasant sing a ballad to a fine melody in one of the old church modes. After a little difficulty I found a teacher of music, who was him-

self the son of peasants, and who knew a number of the folk-airs of Quercy, and at my request he very kindly wrote them down for me. They are quaint, but are remarkably inferior in musical quality to the folk melodies of England. In the Appendix I give a few of the most characteristic.

The question whether small proprietorships are an advantage, is forced on the attention of the traveller on the Causses. Whatever it may be elsewhere, there it is of doubtful advantage.

The peasant is *adscriptus glebæ*, tied down to his little acre of soil that he has inherited; he spends his life in a desperate struggle to maintain a wretched existence thereon; he cannot allow himself more than one or two children; he is dwarfed mentally and morally by his serfdom. In the middle ages he was the slave of a lord,—a man,—now of an inanimate clod.

Anciently, he dared not desert the patch of land he was set by his seigneur to cultivate, unless called to serve in his wars. It is much the same now. He makes it a matter of conscience to till the wretched earth that is hardly six inches deep, and he leaves it only to attend his drill and go through his military service at the summons of the Government official who stands over him.

The great Dionysius the Arcopagite taught that in heaven above and in earth beneath the law of God is one of hierarchies, of stages; that heaven is a stair from the angelic to the perfection of divinity; that earth is a stair from the first glimmer of intelligence to the all-but-angelic intellect. He taught, further, that light passes down each stair by a series of communications from one to another, and that the institution of hierarchies

everywhere is for the purpose of communicating light to those below from those who stand above.

Now, what is very characteristic in English social life is the even arrangement of the social stair, so that there is constant interchange of thought and communication of culture from top to bottom. In our great cities this is not the case; the East End and West End are far apart, yet there are a thousand agencies whereby attempts are made to bridge this separation, and to bring the classes into relation the one with the other. And I think that much, if not all, of the fellow-feeling which certainly pervades the whole community in England, that feeling of love and tenderness for the poor and ignorant and needy that, with us, assuredly prevails through every stage of the upper portion of the ladder, and that respect and regard for those above them which animates the lower classes, is due to the even distribution of the steps in the great stair, in the hierarchic organisation of society in England.

Now, when one looks at France, especially at that portion of it I am now considering, what strikes and saddens a visitor above all is that this evenness of gradation is lacking. There are no upper classes, there are rich people here and there who have a château to which they come for a month or six weeks in the year, but they live in Paris—in Bordeaux—not in the country. The society of the country consists of peasants and officials, *avocats* and *notaires*, that is all. And with what result? Absolute stagnation: no transmission of light, no gradual upraising of dull intelligence, no sweetening of a sour life, paralysis everywhere, and paralysis that is incurable.

There is not a parish in country places in England where there is not an upward movement, where energetic

minds and active hands are not helping members of the community to raise themselves, and throw open doors for their brothers and sisters to advance upwards also. In my own parish, on my own land, I have a number of cottages. In my grandfather's time each of these, now occupied by a single family, contained three, packed together without regard to decency. In my father's time, he insisted on dispersion, and each cottage was divided into two, and two only. How is it now? No cottager is content with having what my father settled, and two cottages in my time are thrown into one, so that each labouring man and his family may have several rooms. That is one instance of the gradual rise in sense of the moral and sanatory fitness of things. That is not all. I doubt if there be a single labouring man's family that I have known for many years which is not decorated with its star—some son or daughter who has done well—"bravely," as they say, and is earning a sum with which a gentleman would be content to lead a café existence in France.

I do not attribute this uprise socially—and moral improvement is just as marked—to difference in race, but to the fact that the hierarchy of Dionysius exists in England, and that the stair has been broken to pieces in France, and only the lowest rungs of the ladder left with nothing above them.

Now let us go back to the question of small proprietorships.

It may be different elsewhere, but on the Causses, not only is the soil becoming poorer every year, but, with compulsory subdivision of estates, the farms are becoming more broken up, and impossible of culture. On this topic I venture to quote a writer on the social

and economic conditions of the Limousin, a province that is rich compared with Quercy, the Rouergue, and the Gévaudan, and one far more calculated to flourish under peasant proprietorship. If things are bad under this system in the green tree, then what must they be in the dry?

“Little proprietorships tend more and more to sink into indefinite crumbling; with this phenomenon as the result, one very contrary to the intentions of the legislator, that large properties are reconstituting themselves, that moderate ones possess some power of resistance, but that the small ones are absolutely ravaged. Now, if landed property in a large number of hands is desirable, pushed too far, reduced to the infinitely little, this principle loses its greatest advantages. Here, without exaggeration of any sort, is the result, in almost every family of little landholders, on the death of the parents. Usually, as in Creuse, the father has nominated his heir, and he receives all that is legally disposable; but as the heir finds it impossible for him to find the cash to pay off his co-heirs, the property is brought into the notarial court, or before the tribunal of the judge. Generally, the favoured child engages to take the whole estate, and to pay off his fellow-heirs, but, as he has not sufficient cash, he is constrained to mortgage; and then, for life, he wears a collar of misery nailed to his shoulders, with inevitable ruin to the family as the result. If the father has not named his heir, then the estate is parcelled up or sold to a stranger, and the family disappears.

“The result of this legislation is, that large families cannot hope to live and develop the paternal estate. Thrown, so to speak, into dislocation every generation, there is always a new start made, again to be destroyed.

The domestic hearth is no more traditional; and yet heaven knows with what passion the peasant loves the soil, the little nook of earth which he has watered with his sweat, where he has reared his children. One must have witnessed the grief and desolation when a farm is brought to the hammer to realise the intensity of this feeling. And these auctions of farms are becoming more frequent—to a really appalling degree. These expropriations and this parcelling up into farms more and more reduced in size go on like clockwork; this parcelling, periodically renewed, necessarily leads to the systematic sterility of marriages. Our rural family is no longer fruitful. The cost of a child is counted, and, as it has been wittily said, first-borns are manufactured by the suppression of *cadets*.

“For some time the peasants of Creuse have been demanding a modification of the laws relative to succession. In 1866 they addressed a petition to the Senate, to give security to the labourer, in giving him liberty to bequeath his property; this would encourage him to perfect his work, to call successors into existence—it would re-establish the family on its true basis, in giving to the father the authority with which he was invested by God. A law of succession, which would safeguard the integrity of the domestic hearth of the peasant, even if it be very humble, would arrest this indefinite parcelling up of estates, and would be welcomed as a social boon. It would arrest the ruin of our rural population, it would secure their fecundity, and assure their stability. This is a question that concerns the future of our race. The democracy of the New World has comprehended that, and it leans all its weight on the domestic hearth. Without families rooted in the soil, there is no security

to the State; without attachment to the soil, no patriotism."¹

The writer of the above passage in a note says, that it would be worth examining how frequently peasant properties change hands, and the peasant families become effaced. "In the commune which I inhabit," he says, "very few properties remain in the same family for three generations. During the last thirty years more than half the small proprietors have been replaced, often by strangers."

What becomes of these peasants that are driven out of their farms, or abandon them in despair? They go, as did the peasants of Italy at the decline of the Roman Republic, to the towns, to the capital, to recruit the effete populace there, some to be industrious artisans, others to swell the dangerous classes, and others again to be mere loafers, crying only for *panis et circenses*.

Meanwhile, where is the old noblesse? Here and there may be found a noble family occupying its ancestral château, but usually poor. Most of the castles, however, have been bought by well-to-do wine merchants of Bordeaux or rich bourgeois in Paris, who think it fine to have a château in the country, and who, perhaps, find it cheaper in the long run to have a house of their own for holiday time, than to go to a fashionable watering-place; but whose influence for good on the neighbourhood is *nil*, because they are not permanent residents.

I will conclude this chapter with a sketch.

One Sunday in December I was in a little place on the Dordogne dominated by an extensive and stately château that crowned a huge rock. I had my early dinner or *déjeuner* at the open window, looking out on the spark-

¹ *Le Limousin*, Association Française pour l'avancement des Sciences, Congrès de 1890. Limoges, 1891, p. 376.

ling river as it flowed by, and at the towers and battlements high up, white against a blue sky.

I asked the little maid who served the meal to whom the castle belonged. She replied promptly, "To M. le Comte de Beaumanoir." I give a feigned name for reasons that will soon be obvious.

"Was he rich?" was my next question.

The fair-haired girl, a true Gaul, shook her head. "Ah, no!—but—such a name! Such a family!" The Celtic feeling of clanship coming out strongly.

After my *déjeuner* I climbed the hill. I was informed that the Count would be proud to show his ancestral mansion. I passed the gateway, converted into a cart-shed, then penetrated to the terrace. Here was the great stair leading to the state apartments. The flags were broken, and grass was pushing through the interstices. The balustrade of the staircase supported on one side a red geranium in an ornamental terra-cotta vase; to correspond with this on the other side stood a pumpkin. The second vase had been broken, and funds were not available for replacing it.

I ascended the steps to the great entrance. I could find no knocker, no bell, so I tapped, and, meeting with no response, walked in, and found myself in the splendid, stone-vaulted, knightly hall, illumined by great windows to the south. This, as I afterwards learned, had been hung with superb tapestries, and furnished with inlaid and carved cabinets. But Mdlle. de Beaumanoir was to be married, a *dôt* was needed, and to provide it tapestries and cabinets travelled to a Jewish curiosity-dealer in Paris.

One adornment there was in the mighty, bare hall, a number of family portraits all put together into one deal

frame for economy. I stood, sorrowful and musing. A great noble family in England had branched off from this house, and bore the splendid name of Beaumanoir, and here was the ancestral nest, here lived the head of this mighty house, sticking his family portraits together into a miserable deal border because a gold bead at 1 franc 50 per foot was beyond his means. All was still. No servant-man came—no servant at all, for the one *bonne* kept was also cook and scullery-maid, and was washing up the plates in a hurry, that she might attend vespers.

I went forth and stepped from the terrace. The castle chapel was also parish church, and village children were creeping up the steps in the rock to attend the prayers, and stopping at intervals to pick the wild pinks that grew out of the rocks, and stick them in their hair.

Then I saw a little weedy vineyard blighted with phylloxera, that had been cultivated on a ledge over the precipice, and on it, pacing up and down, with bowed head, was a grey-haired, tall old man with a beautiful, kindly, aristocratic profile.

I knew it was the Count. He did not see me, and I sat in the sun watching him, and those who came up the rock to vespers.

Presently a little girl of five or six, with a psalm-book under her arm, arrived on the platform, in a poor, patched, washed-out cotton frock. She halted, saw the old noble pacing his withered vineyard, and with a sudden inspiration ran to him, and without a word put her little hand into his.

So, without speaking, the two walked up and down, up and down, the old Count with his eyes on the ground and his mind in the past, the child's daring orbs glancing at the future and at far horizons.

Was it a figure of what might be? A reconciliation between the paysan and the noblesse? I went away hoping rather than believing that there was truth in the sanguine motto of the family, *Mieux sera*—"Things will improve."



CHAOS AT THE PAS DE SOUCY.

CHAPTER V

THE CAÑON OF THE TARN

The Rivers of the Causses flow through Ravines—The Ravine of the Tarn—The Causse from Mende to Ste. Enemie—Ispagnac—Quezac—Castelbouc—Its Oven—Prades—Ste. Enemie—The Descent of the Cañon—St. Chély—La Caze—Montesquieu—The Détroit—Cirque des Baumes—Caverns—Le Pas de Soucy—Legend—Les Vignes—Les Roziers—Montpellier-le-Vieux—The Jonte—St. Gervais—Meyrueis—Castle Roquedols—Huguenots.

As said in the first chapter, the salient characteristics of the Causses are its pot-holes and its gorges. Every river through the limestone and the chalk flows through a rift that is but an open cavern. Here and there we have a river seen in glimpses through the fallen-in roofs of the caverns under which it flows. Very often we see nothing of the river till we go down a pot-hole to look for it, or see it well forth in volume from under a precipice, as the Divonne at Cahors, the Leygues at Touzac, and the L'Ouyse. But the great arteries into which all the subsidiary streams converged rapidly wore away their sides, in fell the crowns of the natural arches and domes, and the fragments were swept along, leaving in course of time the entire line of stream open to the sun.

This is the characteristic of the rivers in the Causses, and highly picturesque, wild, and romantic they are. Some have gorges wide enough to admit of river, road, and

rail, some are so narrow that the river admits of no way at its side. Its waters wash the precipitous cliffs to right and left.

The finest of the cañons in the Causses is that of the Tarn. The whole of the course, from Ispagnac to Les Roziers, a distance of thirty miles, is one succession of marvels. At every turn comes a surprise. The forms of the rocks are not alone singular or beautiful, the colouring is rich as it is surprising. The Dolomitic limestone, which rises in nakedness to the height of 600 feet, and even 1800 feet, on each side of the water, is tinged and splashed with colour. It is fawn, salmon-colour, with patches of red ochre; here stained black, there it gleams white. Everywhere it is sprinkled with the green of the box and the juniper clinging to the interstices. Overhead gleams down the azure sky, and below flashes the foaming river.

The camera is of little advantage here. The heights are too considerable and the colours too strong to produce any satisfaction to the photographer.

The only means of transit is by boat. We shoot rapids where the vast fissure is but 100 feet to 1500 feet wide at bottom, and the walls rise sheer 1000 feet to right and left.

"One might fancy," says M. Martel, "that it was sad and sombre in these formidable runnels. It is not so by any means. Light plays freely there, and converts them into sunlit wells; moreover, though in places the walls seem almost to meet, so that there is scarce room for the river to run, yet soon after they fall apart and give place to green fields, to vineyards and orchards. Thus the traveller is kept on the alert, and charmed by the contrasts between the different aspects of the gorges, and this especially after he has been depressed recently by traversing the top of the sad and uniform causee.

"That which gives peculiar beauty and quaintness to these ravines are the Dolomitic ramparts which wall them in; ramparts hacked about by atmospheric agents, frosts, rain, lightning, into crenelations, turrets, donjons; they are all streaked with ferruginous salts of every tinge, from vivid red to yellow and orange; nowhere, save in Dolomitic formations, can one find such an orgy of colour, and shapes so fantastic and imitative of ruins of human work.

"The gorge of the Tarn is the finest of the three. For 80 kilometres (48 miles) from Florac to Millau this river flows through a narrow sinuous cleft, averaging 1500 feet in depth, between walls flaming like a setting sun."¹

From Mende I crossed the Causse de Sauveterre in the little rattle-trap post vehicle, wondering at the desolation on all sides. Passing the wretched, waterless, and squalid village of Sauveterre, seeing once or twice a shepherd in his long cloak, and being furiously assailed by his savage dogs; at length, weary, and seeing that the evening was closing in, I said to the driver, "Mais, où donc est Ste. Enemie?"

"C'est la bas dans ce trou." He pointed with his whip to a gap, over the edge of a precipice, actually into a hole, and there, 1000 feet below, positively at the bottom of this hole, this split in the ground, I could distinguish roofs. We were apparently coming down their chimneys in a drop from the clouds.

A skilfully engineered road, in a series of zigzags, like that of the Gemmi on Leukerbad, brought us to Ste. Enemie, and to a tidy little inn, cleaner than one might have anticipated in a country where cleanliness is not much considered, owing to the deficiency of water.

¹ *Les Causses du Languedoc.* Paris, 1890.

But it is more just to the reader to conduct him to Ispagnac, and descend the very fine portion of the gorge to Ste. Enemie.

Ispagnac is not a particularly interesting little town. The venerable monastic church of the twelfth century was partly destroyed by the Huguenots. It was taken by the terrible Merle in November 1580. So as to bombard it, he let his cannons down the sides of the steep slopes, with twenty pairs of oxen attached to each by a rope to prevent it from falling, whilst two oxen went ahead leading each cannon in its descent. The Calvinists burnt the town, the monastery, and the church. Nothing escaped the flames save the castle. The mighty rocks of Chaumette that rise over Ispagnac reach an elevation of 1540 feet above the town.

A little farther down, behind a forest of walnuts, is Quezac. This place fell into the hands of the Huguenots, under the Baron d'Alais, on June 9, 1562, when the collegiate church was sacked. It was taken again ten months later by the royal troops; but this was the place of rendezvous of the Huguenots, whence they marched to Chirac, on the Gévaudan, where they cut the throats of twenty-nine priests and eighty laymen. When Merle chose to leave Quezac, at the conclusion of a bargain with the Crown, he found it impossible to convey his cannon up the heights down which he had lowered them. He was forced to saw them into pieces and carry them away in bits; it was worth his while preserving the metal for recasting.

In the valley of the Tarn, indeed in all these gorges, the heat in summer is intense; in winter the temperature is warm and delicious. The vine grew here till the phylloxera destroyed it. Were the inns more comfortable, and cleanliness more to the fore, a very cosy, sunny nook

would suit the delicate chest at every turn. The patient could take easy walks on the level road by the river, or float down it in a boat. The winds sweep overhead, driving the snow in clouds from the Causse de Sauveterre



THE OVEN, CASTELBOUC.

to the Causse Méjean, but none falls into the sunny laps below. Every ray is caught and held there, and radiates back from the warm rocks.

As we proceed, we pass the castle of Charbonnières, dating from the thirteenth century; it was held by Merle for three years.

Next come three sunny villages in a nest of verdure. We reach the extraordinary site of Castelbouc, a castle in ruins, occupying a tall rock that rises like an isolated block of masonry, with cottages and a chapel clinging to the sides, lest they should slip down into the river. This place can be reached only by a ferry-boat. It is planted near a cave, from whence gushes a copious stream. Though small, the village is full of quaint and picturesque bits: cottages built into the holes in the rock; arches, under which one must pass to get to the church; an odd little imitation of Nôtre Dame de Lourdes, contrived under the overhanging ledges of the castle rock.

"At Castelbouc," says Louvreleul in his *Memoires*, "is a village oven so vast that when one puts in the bread, by the time you have walked round the oven you find the bread is baked." The reason is that this oven is scooped out in the rock, and consequently one requires some time to make the circuit. This oven is still in use.

The castle was demolished in the sixteenth century, lest it should fall into the hands of the Huguenot captains, to become a centre for their depredations, from which it would not be possible to dislodge them.

A mile lower down, at a turn of the river, is Prades. Merle and his men, having taken Ispagnac and Quezac, came to Prades, to treat that as they had treated the other places; but the prior of Ste. Enemie threw himself into it, at the head of all the men he could collect, and arrested the captain. Merle in vain endeavoured to take the castle by storm. He was forced to beat a retreat, and by this means Ste. Enemie and the other villages down the cañon of the Tarn escaped his ravages.

The little town of Ste. Enemie lies about a rock on which stood anciently a royal monastery. It was founded



CHATEAU AT STE. ENEMIE.

in the seventh century by the daughter of Clothaire II. and sister of Dagobert I. Her little hermitage stands high up on the face of the rock, and there she is represented in wax over the altar. The monastery is a mass of ruins, but the platform of rock on which it stands is worthy of ascent for the magnificent view it commands of the river, the towering precipices about, and the little town clustered at its feet.

There is but one street in Ste. Enemie, exactly 6 feet wide. Should a cart pass through it, one has to jump into the open door of a house to escape the wheels. This street is the town sewer, into which every sort of abomination is cast.

As my cousin remarked to me, "It would suffice to dip this place of 600 inhabitants in the Amazon to pollute the entire river."

Happily there are no drains; the foulness of Ste. Enemie does not poison the crystal Tarn that glides below its walls.

To an Englishman there is something alarming in the entire absence of, and indifference to, sanitary arrangements in this part of the world. He supposes that typhoid fever, diphtheria, cholera, must rage here and run riot. No such thing.

At Biarritz, when it became a fashionable place, a system of drainage was devised and executed, and at once typhoid fever broke out in all directions. The authorities were obliged to revert to the old system, or rather want of system. Unless drainage be carried out with plenty of water to rinse the drains thoroughly, and these be provided with ventilating shafts, they do more harm than good. In fact, the atmosphere when dry is the best—I will not say deodoriser, for the stinks are self-assertive—but dissipater of the noxious elements.

At Ste. Enemie one engages boatmen. From this point as far as Les Roziers the cañon of the Tarn must be traversed by boat, at one time sliding down an easy stream, then floating over a *planiol* or glassy sheet of almost currentless water, and anon shooting a rapid. The boatmen are very skilful, they perfectly understand their trade, they know every submerged rock that has to be avoided, so that there is in fact no danger, though not a little excitement. On reaching a cataract, the boat's head is turned to the V that the water makes, and if it touch the acute angle where the current is strongest, down it shoots merrily. The passenger sees the leaping and foaming of the river over some rock that opposes the stream, at which his boat seems to be running full tilt; a dexterous turn of the paddle, and the vessel swings round and glides past.

Almost directly we start, the world of enchantment begins. We turn the great buttress of the Chante, and the little capital of the cañon is hidden. The mighty ramparts of the Causses rise abruptly on both sides. Below, beside the water, is a long ribbon of willows, poplars, alders, nut-trees. As we glide on, it seems as though the trees were marching past us in file, and the boat were motionless. Here and there the precipices on each side throw forward bastions and send up pinnacles. One strange mass, like a gigantic and podgy peasant, with his hands in his pockets, and a green *berri* on his head, stands with feet in water, as though to take toll of us as we pass. Before us is the glowing red cliff that faces St. Chély, hot with the sun on it, as though on fire.

Presently we halt at a weir, and have to change boats. St. Chély is a little village of 530 inhabitants, built on a mass of tufa, the produce of a petrifying spring. At this

point the *causee* rises 1820 feet above the river. The eye has lost the power of judging heights and distances. The rocks close in, and seem to completely oppose all farther passage. At St. Chély are two copious sources, one of which foams down into the river below the village. One springs out of a cavern into which are thrust a quaint little chapel and a mill. The church of St. Chély boasts of some antiquity, and has a curious tower with an open arch, behind which is the stair leading to the belfry.

Having left this quaint village, the grandest scenery on the river begins. On the left bank the Tarn has bored caves and tunnels through the white Dolomitic limestone. Between Ste. Enemie and St. Chély we had verdure beside the water; now we pass into a defile where the rocks rise directly out of the river. Through this chasm we glide till the sides fall somewhat back at Pournadoire. Here we see on our right a great cliff with a vast arched cavern in it, and this cavern occupied by a ruined castle, sustained on a bold arch of masonry below; the rubble and earth slope are terraced, and occupied by farms and shaded by walnut trees. A little lower is another—a couple of dwellings like swallows' nests built in a cave, and still inhabited. It is worth while arresting the boat to visit these troglodyte habitations.

We push on, and the next object of interest that arrests us is the delightful little castle of La Caze. This tiny castle was erected in 1489, and was built by Soubeyrane Alamand. It passed to Bertrand de Mostuéjols, commonly called le Capitaine la Caze, who spent his life fighting Merle, and he succeeded in recovering from him the greater part of the Gévaudan. The story goes that this little gem of a castle fell to eight beautiful damsels, sisters, all heiresses to this nutshell. It could be reached

only by boat or by a goat path down the face of the precipitous cliffs from the desert above. Nevertheless, neither river, nor desert, nor precipice could deter suitors, who came, and each returned puzzled to know which of the



POUGNADOIRE.

eight sisters he should take, and how much she would be worth when he got her ; and as none of the suitors could make up their minds, the sisters remained old maids to the end.

In the vaulted parlour that looks out on the river, their portraits are painted in the spandrils. The castle

stands on a little green platform by the waterside, and is surrounded by trees. A spring issues from the rock behind it, and beside it is a farmhouse. The whole castle is in a tolerably perfect condition, and is the property of a gentleman who is unhappily under restraint, so that nothing can be done with it, nor does anyone like to take on him the responsibility of putting it in order, and repairing slight damages caused by weather and neglect. One wing, unfortunately, was burnt a few years ago; of the rest all is in a condition of neglect, windows broken, roof tiles out of place, the rain and damp staining the walls. Four or five hundred pounds would go a long way towards putting the castle into order, in a place where labour is cheap.

Before the castle is one of the finest *planiols*, or sheets of still water, in the course of the river, and a few miles of boating conducts to La Malène, a flourishing village at the bridge where the road to Meyrueis descends from the Causse de Sauveterre and climbs that of Méjean.

In descending the cañon, it is best to make of the passage a matter of two days, and to halt at La Malène. This is what I did, and it allows time for visits to objects of interest on the way. The whole can be done in a day, but then nothing is carried away but a confused remembrance of shooting rapids and whirling under precipices. Besides, at La Malène is a very decent inn, kept by most worthy old people, the Monginoux, who, when their confidence is gained, can give a great deal of information relative to the past.

We come now into the land of the Montesquieu, who have a chateau in La Malène, and ruined castles on the heights. In the rocks above the water is the grotto where four priests remained in concealment for two years during

the Terror. One of these, M. Montégut, was a very nervous man, and the thought of death filled him with fear. He is said to have trembled like an aspen whenever he believed that the *sans-culottes* were near, and his prayer was to escape *la lanterne*. On the other hand, his comrade, M. Popel, was full of courage, and often said that he would rejoice to die for the Faith. Heaven dealt with each according to his powers. Popel fell into the hands of the enemy and was guillotined; the other died in the cave; a third of the priests was paralysed, and was hardly conscious of his danger. They were supplied with food by a young girl, a peasantess of the village of Angle, or by her father.

The boat now enters the *Détroit*, the most striking portion of the cañon. A writer in the *Tour du Monde* says:—

“Here the river is wide, and it is a pleasure to see the reflection of the precipices in the mirror of its glassy waters. They are 300 feet high; above them come loftier cliffs, shooting up another 1500 feet, forming towers, needles, crenelations, bastions, on both sides. In all the fissures of the rock, under all the crevices, rise or lean pines, shrubs of all kinds, and creepers. Here and there between the great masses are slips of verdure. In this solitude, sonorous as a cathedral, one feels a sort of religious veneration; silence falls on one, and the inclination to remove the hat becomes strong. The Straits are the splendid preface to the marvellous Cirque des Baumes.”

The Cirque des Baumes is a vast cavern, three-quarters of a mile in diameter, that has fallen in and left an amphitheatre of precipitous fawn-coloured and orange and red streaked cliffs and terraces, in places overhang-



EXIT OF THE DÉTROIT, TARN.

ing, with the crown of the immense vault lying in ruins in the midst, the river being powerless to remove such masses. Earth has accumulated in the bottom, washed down from the wasted crown of the *causee*; the red friable earth and the marl lying in films between the beds of dolomite and *lias* have formed pockets, and rich vegetation and fine trees have grown up among the prostrate masses, and cottages and farm-buildings peep out from between the verdure. Against the face of the smooth cliff is a little chapel of St. Ilerius, Bishop of Mende in the seventh century, built about the hermitage to which he retired, and where there is a spring reputed to have marvellous powers for the cure of ophthalmia.

Portions of the walls of the *cirque* fall at intervals; and in fact a few years ago a mass buried a farmhouse.

The precipices are riddled with holes, caves that have been occupied by beasts of prey and by men—also of prey, or who have been preyed upon—from a remote antiquity. About 950 feet up, indistinguishable from the boat, is the opening to a remarkable cavern. It was entered in 1866 by the Abbé Solanet, who is said to have discovered at the end a man seated on a natural stone bench, with his elbow on a rock table, and his head resting in his hand, encased in a film of stalagmite and turned to stone. This is no doubt a somewhat fanciful description of a skeleton in a squatting posture, such as was affected by the neolithic men in their burials, before the fashion for cremation set in. In 1875 Doctor Prunières examined the cave, and found remains of the prehistoric inhabitants, of interments of the neolithic age, and skulls of the great cave bear. In 1888 the cave was completely explored by M. Martel. It consists of a series of nine vertical wells in succession, separated from one another by

galleries more or less horizontal. The wells are superposed in three stages. The cave extends 2700 feet, and reaches a depth of 270 feet. The inmost and deepest well ends in a little subterranean lake, 840 feet above the



DESCENT OF THE Puits du Lac.

level of the river, and 600 feet below the platform of the cause.

A very little observation serves to explain the nature of this great amphitheatre of the Baumes. The cavern contained a great lake ; the river boiling in it surged up,

tore at the sides, and worked its way farther, unable to discharge all its waters by the narrow orifice that sufficed in ordinary times, but was insufficient in floods. The roof fell in, the surge leaped over, burrowed under, and finally broke through the barrier of rock that had arrested its course, and the lake, first subterranean, then open, drained away.

Farther down the river comes another barrier, Le Pas de Soucy, where the Tarn disappears under the vast masses of fallen rock. Here the boat has to be left, and a walk of two miles taken before another is reached, where the river reappears at Les Vignes. The Pas de Soucy actually consists of two great falls of rock; the first took place in quaternary times, the latter, it is supposed, in the great earthquake mentioned by Gregory of Tours in A.D. 580. Among the fallen and poised masses three are conspicuous—La Sourde, L'Aiguille, and La Roche Rouge. L'Aiguille is a natural pyramid or spire, 240 feet high, slightly inclining. Below is the enormous block of La Sourde. The following story is told of these stones. Ste. Enemie was much troubled in her cell by the persecutions of the devil. At last, her patience exhausted, she went at him with her hand full of holy water. Asmodeus fled down the Tarn, and the saint pursued. At the Cirque des Baumes was St. Ilerius, rapt in an ecstasy of devotion. The devil, afraid of his coming to the assistance of Ste. Enemie, reduced himself to the size of a field-mouse, and stole past unobserved; then, when beyond, he resumed his natural dimensions and speed, and continued his flight. Just above Les Vignes was the mouth of Tartarus; could he reach that, he would be safe. Ste. Enemie saw that he was on the point of escaping her, when she cried, "Mountain! to my aid!"

Instantly the rocks fell to bar the way. The devil scrambled over the ruins, then down came La Sourde,



LE PAS DE SOUCY.

followed by L'Aiguille. The latter paused in the descent before making the final leap, and called out to La Sourde,

"Sister, do you want me?" "No need," answered the more advanced stone; "I've nipped the rascal."

As the period of St. Ilerius and Ste. Enemie was not so very far removed from the date of the earthquake mentioned by St. Gregory of Tours, which he says brought down mountains in ruins, it is possible that in this legend there may be a dim reminiscence of the real cataclysm.

At Les Vignes the last stage of the descent of the cañon is begun. This stage is also very fine, but a description can but consist of a repetition of the same expressions and of superlatives. Enough has been said to let the reader understand that in the cañon of the Tarn he will enjoy one of the finest successions of wild scenes to be found in Europe.

But it will never do to pass Les Vignes without mention of one of the shortest and best sermons ever preached, and which was there delivered—by a layman.

In 1794, when the months were changed, and the days of the week were made ten instead of seven, and the worship of God was proscribed, the *procureur* of Les Vignes, a man named Ferrat, received an order from Paris that the Feast of Reason was to be celebrated, and that he should make a suitable address on the occasion. Accordingly the church bells were rung, as though for divine service, and when the parishioners assembled, they found the *procureur* standing on the altar steps, to pronounce the requisite discourse for the new festival.

"Dearly beloved," said he in a stentorian voice: "you married women with any worries, pour them into the hearts of your husbands.

"You unmarried girls, find lovers, and do ditto.

"You all who hear me, mind that what goes in at one

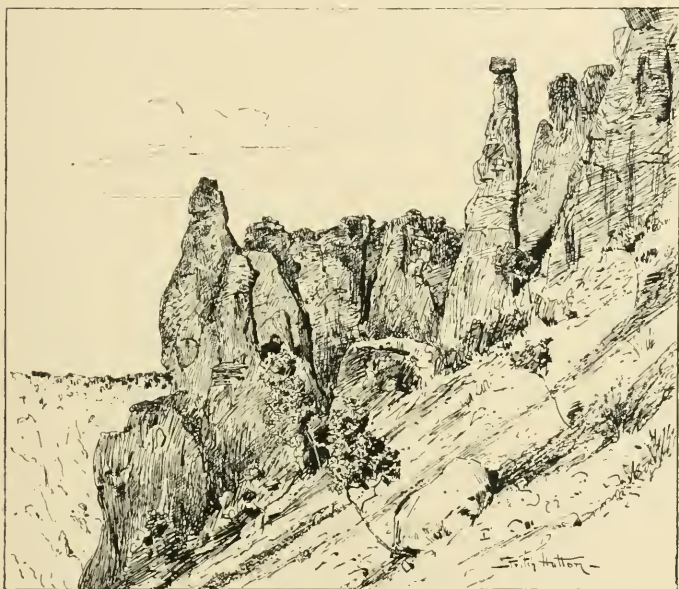


MONTPELLIER-LE-VIEUX.

ear don't come out at the other. Amen! You may go. *Ite, missa est!*"

At Les Roziers there is a comfortable inn, and thence the tourist can start for a visit to the "City of the Devil," Montpellier-le-Vieux.

This is a second natural marvel, a great depression in



MONTPELLIER-LE-VIEUX.

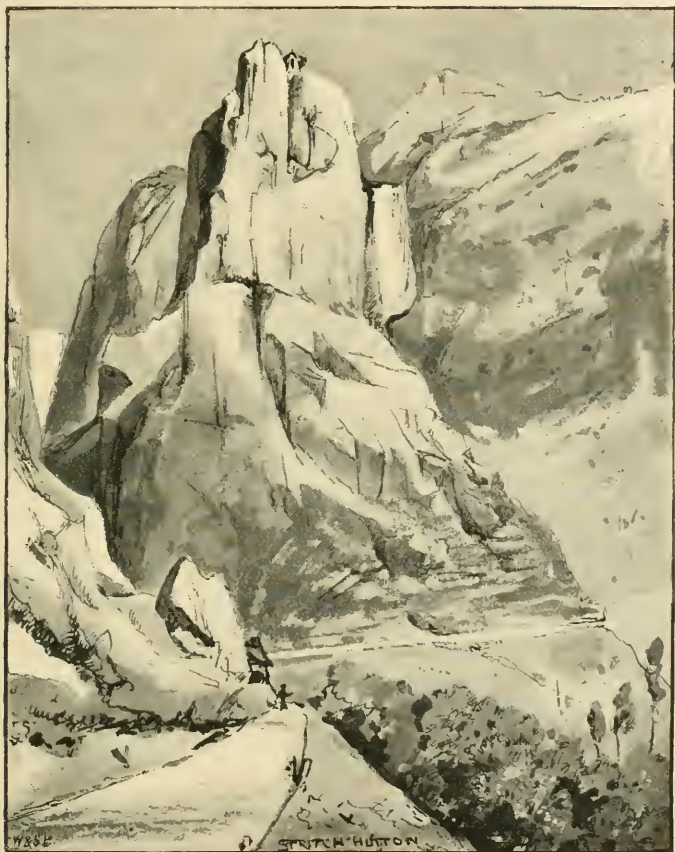
the Causse Noir, worn away by water first, and then by atmospheric agents. A crowd of rocks, hard enough to resist degradation, have been left in the wildest confusion, upright, forming towers, pinnacles, churches, castles, minarets, domes. The space occupied by these fantastic rocks is about 300 acres. Montpellier-le-Vieux was unknown to the world till 1883, when discovered by M. de Malafosse. It was not noticed on the Government

maps till attention was drawn to it. The discoverer announced what he had found to the Geographical Society of Toulouse. "A mighty entanglement of streets, of vaults, of alleys, of projections overhanging,—now crossing at right angles, like a town drawn out to a regular plan, then tossed into a labyrinth in which one wanders with confusion of mind; taken as a whole, or taken in detail, it surpasses description." I do not know that I can give a better idea of it than by saying that it is like one of Gustave Doré's fantasies realised.

There are other of these singular collections of grotesque rocks, those of Mourèze and Bois-de-Paolive, the former on the Causse de Larzac. The only thing at all like these two singular agglomerations of nature's work in a fit of frolic are the sandstone devil-cities in the Riesen Gebirge, Wickelsdorf and Adersbach, both of which I have seen, and, on the whole, consider superior. But all are very fantastic, and stimulating to the imagination.

It must by no means be supposed that the gorge of the Tarn is alone. The Hérault, the Vis, the Dourbie, the Ardèche, all deserve visiting, and richly repay a descent. That of the Tarn has been described as typical, that is all, and as being the finest in its way, but the others present scenes and objects hardly inferior in singularity or in beauty. At Les Roziers the traveller will not only find comfortable quarters, but will be able to make this a centre for the exploration of the Jonte, another interesting valley, where, among the objects of curiosity, he will see the isolated rock of St. Gervais, with its little chapel, a noted place of pilgrimage, on the summit. The peasants of the neighbourhood have an affection for being buried, when dead, in the tiny cemetery on the top, and the corpses have to be hauled up by

ropes for interment. Meyrueis is a town half Protestant, with a "temple" of octagonal shape.



ST. GERVAIS.

About two miles up a side valley is the Castle of Roquedols, of the sixteenth century, a charming building, in perfect order, in the midst of its ancient woods. Alas ! it has recently been sold to a company, which has set up

a saw-mill, and is cutting down all the timber and disposing of it in planks. So the old order changeth. It is interesting to notice the abrupt change of flora when one passes from one geologic formation to another. As I walked up the green valley, in which the nightingales were singing among the poplars as in Virgil's days, I saw that the meadows were white as with dog-daisies, but the gentle air that fanned my face hinted to me to look a little closer, and lo! the fields were white with *Narcissus poeticus*. Then I knew we were off the limestone and on the granite. Numerous caves are in the rocks on the sides of the Jonte, high up, partly closed by walls, so as to convert them into goat-shelters. These have yielded many bones and skulls of the *Ursus spelæus*, which the Christian brothers at Meyrueis have collected in their little museum, where they lie jumbled with objects from the South Sea Islands, sent home by missionaries.

Catholics and Calvinists live in the same place without contention, neither proselytising. They are cut off the one from the other, in religion, as by the great cleft that separates the Causse Sauveterre from the Causse Méjean, and there is no passing from the one to the other. Neither religion presents any attraction to the other. The losses of the Catholics are into Nothingarianism. The Calvinists in the Cevennes are at present afflicted with the Salvation Army, the phylloxera of evangelicalism. Possibly the inventors of the Calvinist religion, in banishing from it every element of emotionalism, made it too cold and monotonous, and this new phenomenon supplies just that animation which is not to be found in the "temples," and so draws to it a certain class of persons predisposed to religious hysteria.

CHAPTER VI

THE FIREHILLS OF CRANSAC

Coal Formation—Cransac—The People of the District—Courtesy—Combustion of the Pyrites—Scene of Fire—Saline Deposits—As described in the beginning of the Century.

IN the sandstone formation of Aveyron lie pockets and beds of coal, and the fields of Decazeville are some of the most important in France, and the collieries of that place form one of the most combustible and dangerous elements in the country.

One colliery district is very much like another in



FIREHILLS OF CRANSAC.

Europe, and Decazeville requires no particular description. But it is otherwise with Cransac; where also coal and iron mining are carried on to a large extent. On arriving at Cransac the visitor is at once struck by the clouds of smoke rising from the hills, and by the red charred condition of those which are not burning. He speedily

discovers that he is in a district that is on fire at several points, that has burnt itself out at others, and in which man is fighting the fire and is endeavouring to extract the coal from the bowels of the mountains before the subterranean combustion reaches them.

The district is hilly; the town dirty with coal dust and deposits of ash; the people are dirty,—they cannot help that,—but are good-humoured and courteous.

Shortly before visiting Cransac I had read a very charming volume, *Our Home in Aveyron*, by an author, who, I believe, was an English overseer to some mines in the neighbourhood. The description he gave of the Decazeville and Cransac miners and their families was not pleasing. He said that scowls and muttered threats met every well-dressed person who appeared in the streets, and that he was repeatedly warned by the police to carry a revolver, and to let it be seen that he carried one.

Now this, no doubt, is quite true of a time of strike and disturbances, and also true with regard to a man in a position of authority over workmen in the mines. But it conveys a false impression relative to these colliers and their womenkind in peaceful times and with regard to strangers.

I may mention an incident which will illustrate this, trifling in itself, but characteristic. I was in a third-class carriage travelling between Decazeville and Cransac, and the compartment was packed with miners, with faces and garments black - begrimed; they were all talking in *langue d'oc*, and smoking hard. Now, I happened to cough, being troubled with bronchitis. At once out of their mouths came their pipes. "Did the smoking annoy monsieur? if so they would extinguish their tobacco."

In vain did I protest that, so far from finding discomfort from the smoke, I liked it. They supposed that I spoke this out of courtesy, and all put their pipes into their pockets.

In the people's park at Cransac, I missed my way. I wanted to get up to the burning fields, and came in a bosky and shadowed walk on a lover and his lass in amorous talk. I somewhat hesitated about interrupting them so as to inquire my way, but the moment they discovered what I wanted, they forgot their love-making to escort me into the nearest track to my destination.

So much for the miner folks' courtesy. The colliers have a hard life of it; for they have to work in terrible heat underground, and in no little danger. In some places the coal-beds they are exploiting underlie other beds that are on fire, and there is ever present the peril of the heat generating explosive gases, or of suffocation. In other mines the men have to cut the beds and build walls athwart them to arrest the fire.

According to popular belief, the English, at the close of the Hundred Years' War, when their domination of Guienne ceased, set fire to the coal-beds out of revenge for their expulsion, and they have been burning ever since the first half of the fifteenth century. This is, of course, entirely untrue. The mountains have been on fire from all time, for they contain the elements for ignition in themselves when in contact with the air.

The coal basin of Decazeville and of Aubin occupies about 40 square kilometres, nearly 25 square miles. The country is hilly and is built up of red sandstone, argillaceous schist and coal, with beds of iron, and porphyries intercalated. Much of the iron is in the condition of pyrites, sulphuret of iron. The sulphur in contact with

atmospheric air rapidly combines, fire is the result, and a development of sulphuric acid which attacks such bases as are present, lime, magnesia, aluminium, and oxide of iron. The sulphates of iron and aluminium formed under these circumstances are often decomposed again by the action of the heat, and the sulphuric acid, set at liberty, escapes along with watery vapour and attacks the organic and inorganic substances round. This greatly adds to the desolation of the mountain heights: the trees are blasted, grass will not grow, and the bushes lose their leaves and die.

On approaching the scene of combustion, one sees that the soil is mined and contains crevices out of which issue watery vapour and acid exhalations. At the edge of the cracks the heat is insupportable. In looking down them one sees fire glowing, on all sides one hears the exploding of rocks and stones, and at night the scene is like that of a volcanic crater, with red masses of fire, lambent blue, green, and yellow flames flickering, and here and there a dazzling star of almost pure white light glaring out from a mass of incandescent cinder.

In some places one may observe conglomerates which have been subjected to the intensest heat, and have completely changed their appearance. These are sandstone, schorls, and clays. Under the heat they have been reduced to a condition like chalcedony and jasper, or run like enamel of many colours, or, again, have been burned to cinders and pumice.

The soil, mined by the fires underground, collapses after a while and forms a series of inverted cones, precisely like volcanic craters, and about them many volcanic products, such as crystals of sulphur and chlorhydrate of ammonia, may be detected.

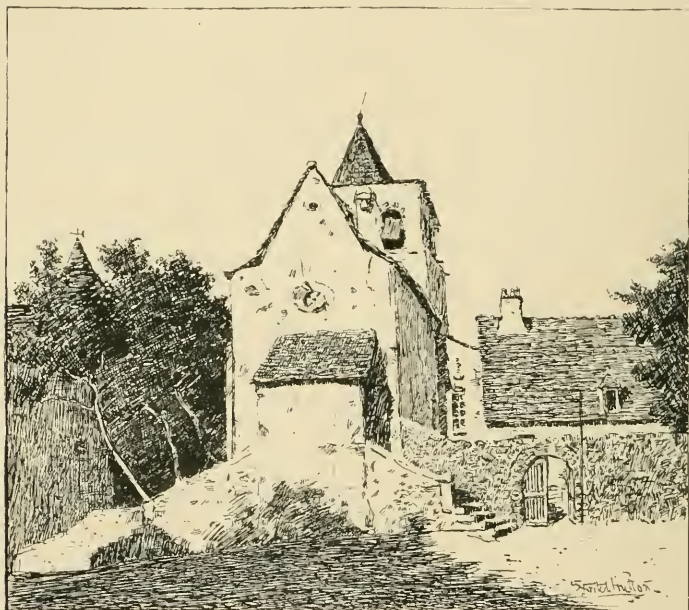
The burning surface is sprinkled with saline concretions and efflorescences of the most varied colours and parts. The white silky needles are composed of alum, the orange are sulphate of barytes; the yellow sulphate of arsenic, in fact, orpiment, is that powerful and dangerous pigment so much affected by æsthetic paperhangers.

In the coal basins of Aubin there are at present four burning mountains, those of Monteils, La Buègne, La Salle, and Fontaignes. One of the large crevasses at Cransac contains eighteen craters all on fire, producing a striking effect at night. By day a pale whitish-blue smoke like a veil plays about the mountain. There are natural vapour baths in the hill of Fontaignes about forty-five feet deep, in which the air is charged with sulphurous exhalations, and the temperature is at 50° Cent. At Sévérac l'Eglise also is a burning coal measure.

One caution must be given to the visitor, the result of experience, not to drink any water from the springs or wells in the region of the burning mountains—at Cransac certainly not; all is impregnated with the minerals liberated and crystallised by the fire, and which, being soluble, sink into the veins of water which supply the town, and act with strong medicinal effect on the consumer. Consequently, it is not on the Causses only, but here on the *houillères*, that the conscientious and scrupulous teetotaller will have a bad time.

A writer in 1802, who published a description of the department of Aveyron, describes the mountain of Fontaignes much as it is at present. He says: "It may be considered a Vesuvius in miniature. It is 400 feet high, and half-way up is a great crevasse of elliptical form, containing eighteen craters grouped at three points. During the day the fire is not visible. This hollow,

bordered by trees with pallid leaves, and full of stones calcined white and of burning red earth, has from a distance the aspect of a great wound. By night the spectacle is sufficiently alarming to those unfamiliarised with such phenomena. On approaching the spot the fire is seen; the soil sounds hollow under one's feet. If



CHURCH, CRANSAC.

we brave the heat and smoke, and look into the fumaroles, we see gulfs of fire where the incandescence is very active. Sticks thrust in are speedily ignited. If one attempts to enlarge the orifices, the column of smoke is enlarged, and little shoots of fire follow. The summit of the mountain is cultivated, and there is even a hamlet there a hundred paces from this natural furnace. One might really suppose that it was inhabited by un-

fortunates indifferent to life, who were careless as to the mode of death in store for them, or by physicians who were taking observations on the progress made by the fire. But neither is the case. Familiarity breeds contempt in the simple peasants on the spot. However, the combustion spreads daily. The land under their gardens is full of fissures, where the heat is insupportable by the hand; and the cellars of the houses, and indeed the lower rooms, are often full of smoke."

This is not the only place where there is fire. There are several others in the neighbourhood. Some proprietors, in the hopes of saving their land, have turned streams of water into the chasms, with a result quite other than what they anticipated; for the water seemed to augment the activity of the combustion, and led to explosions of flame and eruptions of red-hot stones.



ROQUEFORT CHEESE-STORE.

CHAPTER VII

ROQUEFORT CHEESE

The Scanty Herbage of the Causse—The Sheep of the Causse—Ewes' Milk Cheese—The Caussenard Shepherd—Wolves—The Bête du Gévaudan—Its Depredations—Hunt after it—Roquefort Cheese—Its Manufacture—Roquefort Cellars—Glove-Making.

THE Causses where the rock is burnt and deprived of soil grow nothing save a little juniper and other aromatic herbs, and these serve as food for the sheep that in great numbers ramble over them in quest of food, and by force of circumstances are obliged to do without water. In England we consider that a field in which is water is worth half as much again for cattle and sheep. Beasts of all kinds need water, as do men, and it is only dire necessity which forces the sheep of the Causses to slake their thirst on the dew, and do without drinking. Their meat is wretched stuff; and they are reared and tended mainly for their milk and for their skins. Millau and Meyrueis are centres of glove manufacturing, and the gloves are made of sheepskin. Everywhere cheese is the product of the sheep's milk, but Roquefort is the great centre for export, and has given its name to the ewes' milk cheese of the Causses.

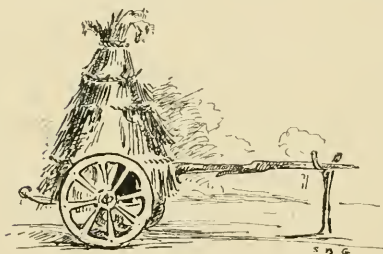
The men who attend to the flocks are picturesque objects in their long brown cloth cloaks, tucked up during

the day if fine, that serve as blankets by night. On smaller Causses girls feed the sheep, attended by ferocious dogs, and as they watch their flocks they spin and sing old *langue d'oc* ballads.

The Caussenard shepherd sleeps out, guarding his flock.

Occasionally wolves come down from the Cevennes or the mountains of Auvergne, but they are happily becoming scarcer every year.

I sketched the habitation of a shepherd, a hut on



HUT ON WHEELS.

a pair of wheels. The entrance is at the side, and he crawls in by thrusting out one of the wheels sufficiently to allow him to creep into the hive behind it.

Formerly the wolves were not uncommon visitors, and did much destruction.

The Gévaudan was in panic from 1764 to 1767, because it was believed that the Causses were haunted by a monstrous wolf that committed such depredations as to make its fame known throughout Europe.

In June 1764 this beast began its ravages, and the first person attacked was a woman, but she fled among some oxen and escaped with only torn clothes. Two days after a couple of children were carried off by it.

Popular imagination worked. It was said by those who professed to have seen it, that it was as big as an ass, with a snout like that of a pig. An engraving of

the period represents it as having its front paws armed with claws, and the hind feet in sabots.

The terrible beast existed, and the whole province was in an ecstasy of terror. It attacked, in preference, children, women, or old men. Between June and October in 1764 it had devoured or gravely wounded twenty-six persons.

On July 3, a girl aged fourteen was devoured at St. Etienne de Lugdarès in the Vivarais; on August 8, a girl aged fifteen at Puy Laurent; at the end of the same month a boy of the same age. At the beginning of September, a woman fell a victim at Arzenac; on the 26th, a girl perished in the same manner at Roches. The beast devoured a girl aged twenty at Apcher on October 7; next day it attacked a boy of fifteen, and tore the flesh off his head. It did the same shortly after to another youth. A child of thirteen was next eaten, then a girl aged twenty. On the 10th October, two young people of Bergounhoux were attacked, along with their little sister, whilst keeping sheep. In spite of their resistance the child was fearfully torn in the cheek and arms. All these assaults were committed in full day.

The matter became so serious that the peasants organised battues against the beast. Several wolves were killed, but the ravages continued undiminished, some in one province, some in another.

The beast had made more victims in the neighbourhood of St. Chély, when the Count de Moncam, governor of Languedoc, sent a company of dragoons—fifty-six men in all—to assist in the chase of the “bête feroce.”

Within two leagues of St. Chély, on December 16, a girl was devoured in spite of the presence of the dragoons hard by. It leaped on her, tore her throat, and escaped with the head. At St. Flour another young woman fell a

prey. On December 28, the beast was seen and pursued, but escaped, owing to a wrong signal having been given by the trumpeter, so that the soldiery did not fire. On December 28, a boy was carried off.

Now the Bishop of Mende intervened with a pastoral. "A savage beast," said the prelate, "unknown to our climate, has suddenly appeared in our midst, and no one knows whence it came. Wherever it appears, there its bloody traces are left, and consternation is spread. The fields are deserted, the boldest men are filled with fear at the sight of the horrible beast, and none dare go forth unarmed. The creature is the more difficult to resist, for it is as cunning as it is cruel. It springs on its prey with incredible agility, and rapidly passes from one district to another to elude pursuit. It attacks in preference the most tender and feeble, even the aged,—in fact, such as are unable to offer effective resistance." The bishop ordered prayers to be offered up in the churches for deliverance.

On December 27, a girl aged nineteen was devoured, next day a man and his daughter were attacked, but managed to escape.

On January 6, 1765, a woman was killed and eaten at Fournels, and the same day, whilst a girl was on her way to mass she was attacked, but escaped. Next day, however, another girl had less luck—she was killed.

The most striking incident occurred on January 12, at Chanaleilles. A little boy, aged between twelve and thirteen, was keeping cows along with several other children, amongst whom was a girl aged seventeen. Suddenly the wolf appeared, rushed in among them, and carried off the girl into a marshy place at some distance. The gallant boy at once started in pursuit, drove the beast

into a portion of the marsh from which it could not well escape, and with a knife fastened to the end of a stick attacked it, and forced it to relinquish hold on the girl, who, though torn, escaped by this means with life.

The officer in command of the detachment sent to hunt the wolf was so pleased with the lad's pluck that he had him enrolled, when old enough, in his corps. He was advanced, and died as lieutenant of artillery in 1785.

A woman at Rouget was seated on a bank near her garden with two children, of which one was a babe at her breast, and the other was on her lap. All at once the wolf was on her, and had snatched away one of the children. The woman put down the other, went in pursuit, and as the beast was escaping over a hedge, laid hold of its hind legs and held on till the brute let go its prey. The Intendant of the province granted this woman a reward of a hundred crowns for her courage.

The very same day that the boy at Chanaleilles had delivered the girl from the wolf, the beast attacked a boy at Grèzes and devoured him.

On the 14th, a girl was eaten at La Bastide in Auvergne.

In a letter of the 20th, the Intendant of the province thus drew the portrait of the "Bête du Gévaudan": "This animal is of the size of a bullock a year old, it has paws as strong as those of a bear, with six claws, each an inch long. Its jaws are of enormous size, the breast wide as that of a horse, the body long as that of a leopard, the tail stout as a man's arm and four feet long. The hair of the head is dusky, the eyes large as those of a calf and sparkling, the ears those of a wolf. The hair of the belly is whitish, that of the rest of the body reddish, with a black line four inches wide running down the back."

It is singular to find so minute an account of a brute that had not as yet been captured or killed.

On January 21, a girl was attacked, but delivered by the neighbours. Next day it tore off a woman's head.

On January 23, it entered an enclosure, snatched off a child of three, and disappeared with it.

On January 30, it killed a young girl and ate her.

"On the last day of January, at Javols," says the report made by the Intendant, "the son of the farmer of M. Labarthe of Marvejols was playing skittles with two companions, when he was carried off some 200 paces, but was delivered by the house dog and the villagers running up to his rescue."

On February 7, 1765, a general battue was ordered through seventy-two parishes in the Gévaudan, forty in Auvergne, and twenty in the Rouergue. The snow was on the ground. The only success obtained was that a peasant who saw the wolf fired, but the beast escaped, leaving traces of blood on the snow.

Next day, at 2 P.M., a child was carried off from the cottage door of its parents, but was happily rescued.

On February 9, a girl of fifteen was devoured. On the two following days, another general battue was ordered and carried out, also without success.

On February 14, another child was eaten. Then a muleteer was attacked, but delivered by his dogs, and by villagers who came to his assistance at his cries. That same evening a little girl of eight years was attacked, and though delivered, died the same night of her wounds. On the last day of February, two women who were in company on their way to mass were attacked, the wolf tore away the throat of one, the other escaped with her garments in tatters.

Then the king issued an edict to enforce the destruction of this terrible beast, and orders were given that when the creature was captured or killed, it was to be sent to Clermont for investigation.

The "Bête du Gévaudan" laughed at the royal injunction. On March 4, it devoured a woman aged forty. On the 8th, it tore off the head of a child of ten, and horribly mangled the body. On the 9th, a girl of twenty was torn to pieces; on the 11th, a child of eleven met the same fate. Children were attacked on the 12th and 13th. On the 18th, a boy was fallen upon; on the 20th, a child was half consumed; on the 22nd, a man and two women were assailed, but escaped. On the 29th, another child fell a victim under the eyes of its parents.

On April 3, a boy of ten, on the 4th, a girl, were eaten; on the 5th, four children were attacked, and one was carried off.

On the 10th fresh battues. Two wolves were seen, but escaped. The whole country was up and armed. Nevertheless, on the 16th, the brute attacked a man on horseback; on the 18th, it killed a young man—"it bled him like a butcher, tore out one eye, gnawed his cheeks and thighs, and disjoined his knees."

On the 21st, as many as 10,000 men were out, and the pursuit was resultless. However, on the 23rd, a she-wolf was killed, and in her paunch were found some rags. The same day a boy of fifteen years old was attacked. On May 2, a woman of forty was devoured, on the 4th another woman. On the 6th, a general hunt—resultless; again on the 9th, the 12th, the 16th, without capturing the terrible beast. On the 24th, it tore the throat of a young woman of twenty-five. She died of the wound. Half an hour later a girl of fifteen fell a victim.

An odd suggestion was now made. It was observed that the *bête* especially attacked women. It was proposed to manufacture a number of sham females and stuff them with poison. Steel traps were proposed, pitfalls. The beast was too wary to be caught by any of these devices.

On June 1, a girl was eaten; on June 8, three children were half devoured. Again, deaths from the same cause on June 20 and 21.

Again the king now intervened, not with a *mandement*, but by sending a detachment of gardes-chasses from Versailles and St. Germain. The Dukes of Orléans and Penthievre also contributed bodies of their huntsmen and keepers; and this large contingent arrived in the Gévaudan on August 7, 1765. During the two months from the order given for the marching of the detachment and its arrival, almost every day had been marked by some fresh attack or death; it is hardly necessary to detail them.

In a great general chase on September 20, the captain in command believed that he had succeeded in clearing the country of the brute. The Intendant of Auvergne wrote to the king: "Sire, we are full of joy unspeakable. M. Antoine de Beauterne, the porte-arquebuse of your Majesty, has killed the Bête du Gévaudan. Having heard that the brute was continuing its ravages in the royal forest of Chazes, he sent there your Majesty's valets, beaters, and dogs. Then he went in pursuit, and, finding its whereabouts, ordered a battue. Your Majesty's keepers and forty Languedoc sharpshooters entered the wood. M. Antoine planted himself at a narrow exit. All at once he saw the monster coming towards him, trotting down the path, and presenting his flank. He fired his *tromblon*, charged with 35 wolf-shot and a bullet.

The beast fell, with an eye blinded. The *Sieur Antoine* was upset by the recoil of his *tromblon*. However, the beast rose and rushed on him; M. Antoine, not having time to reload, cried for help. A man named Reinhard, keeper to Mgr. the Duke of Orléans, arrived in time, aimed his carbine, and shot the creature dead. It turns out to be a wolf, 32 in. high, 5 ft. 7½ in. long, and 3 ft. in circumference. The weight, 150 lbs.

The *Sieur de Beauterne* received the Cross of St. Louis and a pension of 1000 livres as recompence for his courage.

The country breathed for a while. It was believed that it was freed from the beast, but next December the ravages began again.

Dead dogs, poisoned with *nux vomica*, pounded glass, and dried sponge, were strewn about the country, but though many wolves were killed by this means, the number of deaths through the ferocity of the terrible *bête* continued.

At last a peasant named Chastel shot it. The brute was disembowelled, and in its paunch was found the shoulder-bones of a girl it had devoured some thirty hours before. The body was put in a box and sent to Paris, but on its arrival was in such a condition of decomposition that it had to be burned.

The deaths by violence now ceased, and the Estates of Languedoc decreed large rewards to the peasant who had cleared it of the terrible monster.

The *Bête du Gévaudan* had finished his career. His ravages had excited general attention through Europe. For three years the newspapers had recorded his doings. Finally, Fréron, in his *Année Littéraire*, had given a portrait of the brute, which the celebrated actress, Mdlle.

Clairon, believed to be a caricature of herself; she there-upon obtained an order for the committal of Fréron to prison in Fort l'Évêque. Happily an attack of the gout saved the journalist from being interned.

A report on the ravages of the three years, 1763 to 1765, names ninety-two victims, and many others who had been attacked or wounded by the brute.

Now, when we come to look through the results of the continuous wolf-hunts these deaths gave rise to, we find that between 1762 and 1766 as many as 288 wolves had been killed. It is, therefore, by no means unlikely—indeed, it is most probable—that instead of one monstrous Bête du Gévaudan, there had been a good many wolves engaged in eating girls and little children; but popular imagination ran them all into one gigantic monster. The number of wolves in the Gévaudan must at that time have been very great, for between May 1761 and February 1770 the number killed was 679.

The Gévaudan monster has occupied us perhaps too long. We will return to our muttons.

Roquefort cheese is made either exclusively of ewes' milk or of ewes' milk and goats' milk combined. If even a little cows' milk were mixed with it, the peculiar character of this cheese would be lost.

The milk is passed through a colander, and then allowed to stand. After that, it is put into great copper vessels, and is subjected to pressure till it coagulates and the whey is squeezed out. It takes about 100 lbs. of milk to make a small spoonful of curd.

When the curd is sufficiently compressed, it is given to women to stir with their hands for three-quarters of an hour. Then it is subjected to pressure again, and the rest of the whey is drawn off. Next, the curd is

placed in boxes pierced with holes, and allowed to drain. At the end of three hours the cheese is withdrawn from these cases, and is bound up into shape by means of bands of linen. Then it is taken to the drying place,



ROQUEFORT CHEESE-GIRL.

where it is turned several times a day till covered with a crust which allows of the cheese being handled without breaking. This operation, which lasts from six to a dozen days, is the last to which the cheese is subjected in the dairy. In this condition it is sent to Roquefort.

There it is put away in vaults, natural and artificial.

Roquefort is a singular village or small town, built on the side of a limestone rock or mountain that is literally honeycombed, riddled through and through with cellars for cheese. Many of these are natural, many natural caves that have been enlarged artificially. The mountain is called Cambalou; on the south side it is quite precipitous. The natural caves number twenty-three, and there are thirty-four in all. The rocks in parts of the town lean over the street, and close so as to contract the way to the smallest possible limits. It is a quaintly picturesque place. Its whole business is connected with the cheese trade, and indeed a savour—not savoury—of cheese pervades the place. Some of the cellars are in storeys superposed. Within are shelves covered with straw, on which the cheeses are ranged on their sides. The rock is perfectly dry, but in a south-west wind water trickles down the sides, due to the condensation of the moisture in the air on the ever cold rocks. The temperature in the caves is always much the same, from 10° to 12° Cent. It is in these cellars that the cheeses acquire their peculiar flavour, or rather maturity. Formerly they were kept for months in the rocky vaults, and leisurely developed the blue mould that is so much appreciated. But now the manufacture of the cheeses has fallen into the hands of companies, and these, being impatient of so lengthy a process, and being eager for a rapid return, contrive to blow bread-crumbs into the curd, and the bread-crumbs become mildewed rapidly, and give to the cheese the appearance, if not the flavour, of old blue mould.

But the treatment of the cheeses is not yet complete. After they have been brought into the natural cellars of Roquefort, salt is crumbled over them, and rubbed

in during two or three days. Then more is put on them, and this also is rubbed in. When thoroughly salted, they are scraped till the outer skin is removed, and of this round cheeses are made, called *boles* or *rubarbes*, that are intensely salt. Next, the cheeses are laid out on shelves apart. In a fortnight they are covered with a white growth of mould, which is removed. A second fortnight produces another similar crop, which is also brushed off. Then they are tested if ripe. Formerly it took from two to three months to ripen them; now they are ripened and sold off quicker.

The milk of which these cheeses are made comes nearly all from the immense Causse of Larzac. The production of Roquefort cheese is said to put eight million francs in circulation every year. The population of the place is about 1300; but the cheeses sold as from Roquefort do not all come thence; they are manufactured also at Cornus, Landric, Saint Paul, Corps, Bourquet, and many other villages. The hides of the sheep go to Millau and Meyrueis for glove-making.

Roquefort cheese may be excellent eating—it is not pleasant to the nose. I left Marvejols on my way to Paris. Three little parties were in the same carriage with me, all prepared for a night journey. We left Marvejols at 3.10 P.M. and were to arrive in Paris at 5.15 the following morning. All the three little parties were provided for the night—for supper, collation at midnight, early breakfast—with supplies of Roquefort cheese in an advanced condition of ripeness, exhaling a very emphatic odour. I held out till shortly before midnight, and then fled—to an hotel at Clermont, to continue my journey next day, *sans* Roquefort cheese.

CHAPTER VIII

TRUFFLES AND TRUFFLE-HUNTERS

The Story of the Talon Family—The Truffle and the Oak—The Truffle a Parasite—Formation of a Nursery—When the Truffle is Ripe—The Pig as Truffle-Hunter—Dogs Employed—The Growth of the Tuber—The Preservation of the Truffle—Commerce in Truffles—Cahors—Its Market—Italian Truffles—Fattening of Geese for *paté de foie gras*.

In the year 1810 there lived in the hamlet of Talons, at St. Talons, at St. Saturnin-lez-Apt, in Provence, two men, cousins, bearing the same name of Joseph Talon ; the one was the son of Peter Talon, the other of Anthony. Joseph, son of Peter, had some land that produced nothing, and, rather than that it should remain unprofitable, he sowed it with acorns, thinking to feed his pigs from the trees when they bore. Bear they did, in the course of time ; but what was his astonishment, when he turned his pigs in among them, to find that they bore something far more profitable than acorns, viz. truffles. They did not, indeed, bear them on their branches, but about their roots. This was indeed a discovery. Joseph now gathered carefully every acorn from his little plantation and sowed a fresh patch of ground, and carefully also destroyed every acorn he did not plant, lest his neighbours should obtain any of this precious truffle-bearing tree. He went on

sowing every parcel of his little property with glands, and as the oak trees grew, they produced truffles. That was the beginning of his fortune. Years after he took his children to look at his plantations, and said to them, "Every man is sent into the world for some purpose: I was sent for this."

But the secret could not be hidden. The villagers marvelled to see how eager Joseph was to plant oak trees, and they watched him closely. His cousin Joseph, son of Anthony, detected him destroying his acorns, and as it was now well known that Joseph, son of Peter, sold truffles, it was concluded that he had discovered a sort of truffle-bearing oak. Now, truffles fetch a high price—a sovereign for a kilo; that is a little over two pounds. The neighbours of Talon, above all his cousin, followed his course—they sought out oaks about whose roots truffles grew, and sowed their land with their glands. They also, in course of time, reaped a harvest, as had the discoverer. That was the beginning of truffle culture, which is now assuming some proportions in that part of France where the vines have been destroyed by the *phylloxera*, and plantations of oak are taking the place of vineyards.

But what connection has the truffle with the oak? That has long been a puzzle. Where no oak trees grow—but, indeed, a few other trees, such as the nut and the poplar—there are also truffles. In certain soils, in certain climates, as surely as oaks are planted, so surely in ten or twelve years do truffles arrive. Cut down an oak wood that has yielded a harvest of this precious tuber, and the truffle disappears.

When Pliny said that the truffle was the curdling of the soil, under a lightning flash, he talked nonsense. He had not subjected the truffle to observation, and he ventured

on a guess. The peasants, who for many centuries have made money by collecting truffles, formed their own theory to explain the existence of these products of nature. They asserted that the truffle was an underground oak-gall, due to the puncturing of the roots by a little fly that they observed hovering in the shade of the oak, and was a sure indication of the presence of truffles beneath the soil. Their theory was better than the guess of Pliny, for it was based on observation and showed reason. Nevertheless, it is false; but its falsity has been demonstrated only of quite late years.

The true position of the truffle has been determined by science with the aid of the microscope, and it has been proved that it is a subterranean mushroom—a parasite on the fibrous roots of the oak.

The truffle is a parasite, or of semi-parasitic life, on the tender fibrous roots of the young oak, the nut tree, the poplar, and a few other trees. Moreover, of truffles there are many kinds, none absolutely poisonous, but two only come into the market, the winter and the summer truffles, the black and the grey.

The truffle is of the nature and order of the mushroom, and it grows from spores as does the mushroom. The latter carries its seeds in the delicate radiating films under its umbrella, whereas those of the truffle are contained within its fleshy mass, and are liberated only by the decomposition of the flesh.

It has no roots perceptible to the eye, when taken out of the ground; it has, nevertheless, filaments very fine and delicate, with which it draws its nourishment from the oak and from the soil, and these are atrophied when it reaches maturity.

There are certain essentials to the well-being of the

truffle ; these are that the soil should be shallow and light, and that it should not be subjected to frost.

Shallow the soil must be, as it lives on the minute fibrous roots of the oak, and cannot endure to seek these deep in the earth. Consequently, where the oak cannot drive its tap-root far down, but must send out lateral roots near the surface, there the truffle thrives. The truffle, moreover, hates heavy soils, clay it cannot tolerate. The soil must be light that it may expand to its full development. Frost, when it touches the tuber, kills it, and it rots. The shallow soil that covers the limestone hills of Quercy, of Périgord, and of Provence, suits the truffle exactly, so does the mild climate, and the absence of intense frosts. The black truffle, gathered in winter, grows abundantly to the south and west of the great central tableland of France. On that it cannot live, owing to the cold, but it thrives on its sun-baked spurs. The summer truffle, however, is found so far north as Paris, and is gathered in tolerable quantities in Burgundy and Champagne. It is, however, considered inferior to the black winter truffle.

Juvenal represents a certain Alledius as exclaiming, "O Lybia, keep your corn, but send us your truffles."

The tuber has been in request by gourmands ever since, but never perhaps was the demand for it greater than at present. In Paris no good dinner is served without truffles, they are as much expected as olives ; and the demand has provoked the formation of artificial fields of truffle-culture. Nothing indeed is more simple, nothing demands less labour ; but then patience is required, for the truffle does not appear till the oak plants are ten or twelve years old.

The first token that the truffles have attacked the fibrous roots of the tree is the withering away of the

herbage in a circle round the trunk. The truffle only attacks the delicate fibrous tissue of root, and that only when spread near the surface. As the tree grows older, the ring of dead herbage widens round it; but after some years the oak becomes so robust that it is able to resist the attacks of this tuber, and an oak of a good ripe age has them not. The truffle may be likened to certain diseases to which children are liable, but from which adults are free.

In forming a nursery of truffles, the oak-glands must be sown in a light soil, in a sunny aspect, in a position well drained, and also where the rock is near the surface, so as to force the tree to expand its roots laterally. It cannot bear the frost, as already said, and therefore the true black truffle is found only within a well-determined zone in France, where the mild climate and the friable soil lying on limestone exactly accord with its tastes. Only the grey tuber that is harvested in summer, a very inferior truffle, is found north of the great central plateau of France, and this reaches its extreme northerly point of appearance about Paris.

The truffle is a round or potato-shaped tuber about an inch and a half to two inches in diameter. It has a rough, crinkled, or blistered surface. When cut, the section shows a dark marbled texture. The truffle is aromatic, and indeed it is by the scent that it is discovered. It begins to grow in April, and is ripe in November. It is said never to be quite good till after the first frosts. The time for truffle-gathering is from the 20th November to the 12th February, or thereabouts. There are various kinds of truffles, besides the grey summer truffle. These latter have smooth skins, and vulgarly go by the name of *dogs' noses*, because

in texture they resemble the nose of the dog. But there are black, grey, and yellow dogs' noses.

The search for the truffle is made in several ways ; one is by looking for the *mark*—that is to say, a fissure in the soil, formed by the swelling of the tuber. When this is observed, and the *truffier* does not think the tuber is quite ripe, he puts a stick or stone on the spot to mark it.

Another method is to watch the *fly*. This insect hovers over the truffle-beds, to enter the crack in the soil and deposit its eggs in the flesh of the tuber, on which the larva feeds till the period of change, precisely as flies lay their eggs in the mushroom. This is, however, a tedious method, demanding time and patience, and it is used only by the *truffiers* who are too poor to supply themselves with a truffle-hunting pig or dog.

The third way is that of employing a *pig*,—generally a sow,—which scents out where the precious tubers are. All pigs are not alike good questers. Some have a keener scent than others ; some are more amenable to discipline ; some are lazy ; some are enthusiasts in the pursuit. In fact, a good truffle-hunting pig must have superior intelligence and also certain *moral* qualities.

The odour of the truffle is potent, and exhales freely through the porous soil.

A pig must not be overstrained. After a while, he or she gets tired, loses temper, and refuses to snuff out truffles. Accordingly, the quest is made in the early morning or in the afternoon, with an interval for rest between. So keen is the scent of a good truffle-setter, that a sow has been known to run in a direct line of 150 feet, snuffing towards a point where, some two or three inches underground, lurks a truffle.

When the pig is led to the place where the search has to be made, he goes about snuffing the soil, and then, having discovered the spot he seeks, halts and grunts. If he begins to grub, and dares to take the tuber in his



PEASANTS HUNTING TRUFFLES WITH PIGS.

mouth, a blow of a stick on the snout is his punishment, his jaws are forcibly opened, and the truffle is liberated. But a trained pig never ventures to touch the truffle; he merely indicates the spot, and waits looking on till his master has picked the tuber out of the earth with his

fingers; then he receives as his reward a bit of bread. It is astonishing how much intelligence the beast displays on these occasions: the expression of self-importance that comes into his small eyes when he has marked a spot; the impatience with which he watches his master's attempts to unearth the truffle; and his vexation and resentment if he be not paid for his labours with promptitude,—all show intelligence.

We can understand a French *savant*, after describing it and the uses to which it is put,—its flesh for meat, its bristles for brushes, its skin for binding books,—exclaiming, “Verily the pig is an encyclopædic beast!”

There is great difference in sows. Some are much more intelligent than others, understand their duties better than others, are more amenable to instruction; some have keener scent than others. Again, some have nobler moral qualities than have other sows; are less disposed to sulk, are more ready to resign the discovered delicacy, find more zest in the pursuit. They have to go through long discipline, and a good truffle-questing sow fetches a high price; from £7 to £15.

When the truffle season approaches, the sow has to have her feet put in order. They are tender with treading on the litter in her sty. They have to be trimmed and practised on hard ground, till they grow firm and strong, and she is able to climb the hillsides and run over stones.

Nevertheless, the sow cannot work for many hours on a stretch. She tires, and in the middle of the day loses all interest in her work. Sometimes she proves restive, irritable, and perverse. She is taken out in the early morning, then given a long rest in the middle of the day and taken out again in the afternoon.

The fourth way of searching for truffles is with a *dog*. Any kind serves. The dog, when trained, pats the ground with his front paw, and thus indicates to his master the spot where he is to grub. The dog has certain advantages over the pig; he tires less readily, and he can climb better over the rough ground, that hurts the feet of the pig and wearies him speedily. But, on the other hand, the dog is more subject to distraction; a hare, a rabbit—any living animal draws him away; and it is found impossible to search for truffles with several dogs: they play together, they distract each other's attention; whereas the pigs act independently, and go on steadily with their work till their patience or powers fail. The pig has not the levity of the dog, but then he has his humours; he can be terribly perverse, and sometimes, in a sulk, will absolutely refuse to work. Certainly, among the peasants the pig is preferred to the dog in truffle-hunting.

A dog has to be trained to fungus-hunting, whereas this comes naturally to the pig. Finely sliced truffles are mixed with the food of the dog when young, so as to imbue him with a liking for the flavour, and to regard the scent of the truffle as indicative of a meal in store. The next step is to take the dog into the woods, and place meat seasoned with truffles under the soil, and let him search it out.

There is a fifth way of searching for truffles, but that is one only pursued by poachers. It consists in *sounding* for them.

Truffles are sadly exposed to being poached, and the dog is the animal trained to poach by his rascally master. The dog will himself dig up the tuber, and bring it in his mouth. The poacher has sometimes his store of stolen truffles concealed under leaves, and he

sends his dog to remove them. This the faithful creature does, and poaching truffles by this means is difficult of detection.

The botanical name of the black edible truffle is *Tuber melanosporum*.

As it grows and swells, it raises and cracks the earth above it, and through these cracks various insects enter and lay their eggs in its flesh, which is to serve as food for the larva till change of condition. The peasants have observed the fluttering of the insects, have noticed that they have entered the soil, but they drew from this observation the wrong conclusion, when they supposed that they wounded the root of the oak. What they pricked was the ripening tuber.

As already said, the first notice given of the presence of the truffle about the roots of the oak is the perishing of the grasses and flowers that covered the soil. This is occasioned by the minute filaments thrown out by the truffle in its growth, which envelop and strangle the roots of the plants above and around it. But as the truffle ripens, its rootlets are atrophied and disappear, leaving marks on the surface of the tuber where they have been; and as the truffle is dug up when ripe, then all these rootlets have disappeared, and the tuber comes up like a nut, so that it has long been supposed, erroneously, that it was without roots.

If a mushroom be taken and placed, when ripe, over a sheet of paper and tapped, then a fine powder falls on the paper, from the radiating membranes under the cap. These are the spores or seeds. But the truffle does not produce its spores in the same manner. They are contained within its fleshy body, and are only liberated when the flesh decays.

Usually the truffle lies from one to three inches under the surface of the soil, consequently it is very liable to be killed by a hard frost, and only flourishes in such southern districts where the frost lies superficially. After oaks have attained the age of 25 or 30 years, they are able to resist the attacks of the truffle, at all events spasmodically. It has been observed that after they have attained this age, a couple or more years may elapse without any truffles appearing about their roots, then for a year they are produced, and then again ensues a period in which they are free. That the truffle reduces the vitality of an oak, just as does mistletoe, can hardly be doubted, as it drains away the sap from the feeders of the oak. It attacks the essential organs of its life.

As the law is now well understood that a truffle ceases to produce regularly after the tree on which it feeds has reached the age of from 25 to 30 years, in artificial truffle grounds the young oak trees are invariably cut down at this age. Rather hard on the oak—but the tree is only valued for its parasite. By planting acorns every year, a regular crop of these earth-nuts is obtained. No coppice is fruitful in truffles. “Coppice,” said a *truffier*, “is the poison of these tubers.” They must have freedom in which to develop; moreover, what kills them is the accumulation of dead leaves, or any substance above them, which excludes light and air. An excellent truffle ground has been ruined for years by the accumulation on it of faggots that have been left, and not immediately removed. Moreover, much injury is done in an oak wood when the trees are felled, by dragging the timber along the soil, as it tears up the tubers, and injures the fibrous roots on which they feed.

Vast quantities of truffles are brought to Périgueux, where are many manufactories. They are bottled and

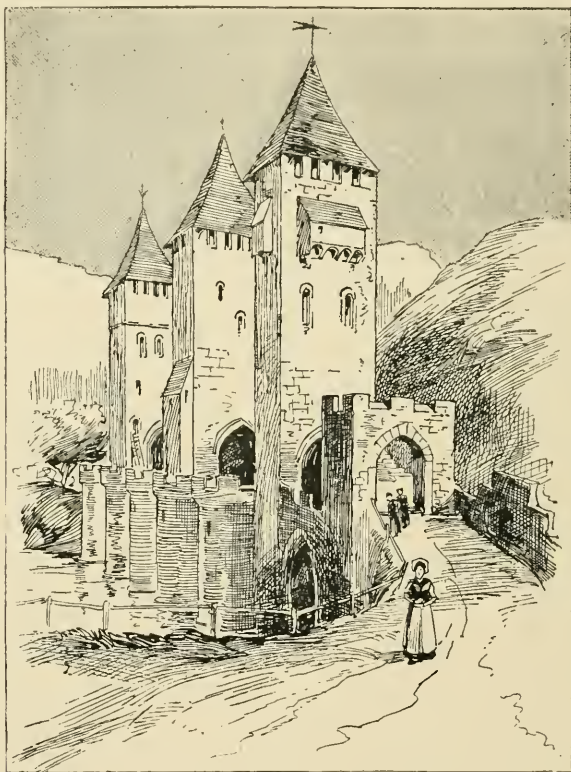
tinned; and they enter into the composition of the patés or which Périgueux is famous; patés of partridge, patés of hare, patés of *foie gras*, and various jellies and spiced dainties. The winter months are those when this manufacture goes on, for not only is the truffle only then in season, but so also the game, and then only have the geese been fattened up so that their livers are enlarged.

The preserved truffle is hardly to be commended. It is placed in a bath of boiling water for at least three hours, when it has given forth a good deal of its flavour. Then it is hermetically sealed up. The main consumption of truffles is in France. Two-thirds of those sold are eaten at home. France is a favoured land for truffles, and Frenchmen love them. In 1885 nearly 47,000 kilos were exported to England, 26,000 to Germany, 8000 to China, and 17,000 to Belgium. The demand in the United States is not very great, 9550 kilos. France cannot supply the demand, and something like 20,000 kilos are imported, mostly from Italy.

To hear enthusiasts speak, one would expect something more of the truffle than the unprepossessed are disposed to allow. It is said to assist digestion, to have medicinal properties, to be a dainty above all other dainties; it is called the "diamond of the kitchen," and "the pearl of Périgord." But no medical man of experience will allow that it has curative properties; and certainly if a diamond or a pearl, it is a black one, and, but to the professional gourmand, not very tasty.

Although the best truffles are reputed to be those of Périgord, yet the department of Lot, of which Cahors is the capital, produces a far larger amount than that of Dordogne, and the principal truffle market is at Cahors.

This venerable city is planted on a rocky tongue of land, round which winds the beautiful river Lot. On all sides tower up limestone mountains, barren and dry, but with limpid springs oozing out at their bases. This is just



THE BRIDGE, CAHORS.

the country for truffles, and they flourish wherever there are oaks on which they can prey.

Cahors possesses a bridge that surpasses even that of Prague in picturesqueness. It is mediæval, consists of six arches, and has on it three towers. It is in good condi-

tion, and has been carefully restored. Formerly the second bridge had likewise its towers, but these have been destroyed. According to tradition, the devil assisted the



THE DEVIL ON THE BRIDGE, CAHORS.

architect commissioned to build the bridge, stipulating for the soul of the architect. By some means the latter outwitted the devil, who in a rage vowed that the bridge

should never be completed. Accordingly, one angle at the top of the middle tower remained ruinous all through the Middle Ages. At the restoration of the bridge the ruinous angle was rebuilt, and the figure of Satan was placed there, in token that modern science had defeated him.

The cathedral of Cahors is one of those quaint domed Byzantine edifices that are found about this region of France. It has two domes, and consists of one vast hall, without pillars and aisles. The easternmost compartment was pulled down in the fourteenth century, and rebuilt in the style of that period. The church is very odd and very striking. It stands in the same relation to Amiens or Bourges as does a stout old lady to a slim and tall maiden. It is low, broad, solid—and does not pose to be thought beautiful.

It is an amusing sight to stand in the market at Cahors and watch the sale of truffles. The cunning, shrewd, suspicious French peasant shows himself there in his true character. All the largest truffles are at the top of his sack. Below are not only the smaller, but also “dog’s noses.” To this market come the agents for the great manufacturers of conserves at Périgueux, and much haggling ensues and turning over of the stores exposed. Finally a bargain is struck, and the average price is 15 francs, or 12s. 6d., for a kilo, that is, a little over 2 lb.; but at times it reaches 28 francs. Some years favour the production of truffles, and in some they are scarce. But whether in plenty or scarce, the demand is the same, nay rather, it grows. The bottled and tinned truffle bears the same relation to one that is fresh, as does the tinned lobster or the potted peach to the lobster fresh from the sea or the peach from the sunny wall.

Truffle grounds are regularly let, and the Government derives a revenue from its domains planted with oaks,



A STREET IN CAHORS.

which it farms to *truffiers*. One little village in the department of Lot, nearly ruined by the disease that swept away its vines, replanted with young oak, and now

is flourishing on the revenue derived from the truffles. In one year its harvest of truffles brought in 300,000 francs.

The Italian truffle (*Tuber magnatum*) is peculiar to Italy. It is liver-coloured internally, and has a strong scent of garlic. Its habitat is much the same as the French truffle, but it differs in this respect, that it is not confined to woods, but is found in the open field as well. The Italian peasantry prefer to roast their truffles in hot ashes.

In Great Britain we have a number of species, of which the *Tuber aestivum*, that is found in abundance in the New Forest, is most esteemed. It is hunted regularly by trained dogs in the Forest, and its market price varies from 2s. to 5s. per pound.

The only occasion on which I have met with discourtesy in Southern France was at Périgueux, when I visited a factory of potted spiced meats. The proprietors absolutely refused to let me over it and to give me any information. But there was a reason for this. A few years ago some Americans got into one of the factories, observed the processes, and started similar manufactories in America. As the export to the United States amounts to something like 25,000 lb. per annum, this naturally enough aroused the anger of the French manufacturers.

Closely connected with the truffle is the *foie gras*, which is flavoured with slices of it.

The geese are fattened for three or four weeks on Indian corn, which is poured down their throats through funnels. They become obese and can hardly waddle about. Their livers become enormously enlarged, and when killed, the poor brutes are sold rather for their livers than for their flesh. *Foie gras* fetches from 6 to 7 francs a kilo.

CHAPTER IX

THE REINDEER HUNTERS

The Vézère at Les Eyzies—The Chalk Cliffs—Consequences of the Formation—Preservation of Relics of the Past—The End of the Glacial Age—Axes of the St. Acheul Type—The Fauna at this Period—Formation of Historic and Prehistoric Strata—Fall of Blocks—The Method of Excavation—La Laugerie Haute—Condition of Primeval Man—Skins for Clothing, how prepared—The Mousterian Age—That of Solutré—That of La Madelaine—Poisoned Arrows—New Form of Flint Tools—Saws—Artistic Productions—Shelters on the Célé—Extravagant Depreciation of Primeval Man—The Cannstadt Type of Head—The Crushed Man, and the Mentone Men—Esquimaux Burials—Religion of the Primitive Man—List of Stations near Les Eyzies.

THE line from Périgueux to Agen runs down a little confluent of the Vézère, and, suddenly entering the valley of this latter river, crosses it by a viaduct, makes a sweep, and then recrosses the same river a little lower down. Half-way between the bridges is the station of Les Eyzies, a classical spot to prehistoric archæologists.

The scenery of the river at this point is singular and striking. The Vézère flows between precipices of chalk, which assume strange forms. We are here not in the Dolomitic limestone, but in a cretaceous formation. Nevertheless, to the untutored eye, there is no great difference between the chalk and the limestone cliffs; there are the same overhanging cornices, the same caves and scoopings,

the same fantastic masses. Nevertheless, they are different ; on a second look the horizontal lie of the beds proclaims this.

I can do no better than quote the description of this remarkable reach of river by MM. Lartet and Christy, who drew to it the attention of Europe.

The Vézère flows between "two escarpments of



LA LAUGERIE HAUTE.

massive rock, more or less interrupted by ancient falls. The summit is usually crowned with projecting cornices, below which are great horizontal niches or hollow flutings. These great flutings are strikingly evident at the same level on the two sides of the valley, where the escarpments overlook the river, and where they are continued in the rock bordering the lateral valleys down which small streams run into the Vézère. Here the first impression on the observer is that these are great lines of erosion,

due to the rapid movement and long-continued passage of a vast mass of water, that has filled both the principal and the accessory valleys. Further reflection, however, and a more attentive examination, soon suggests a more reasonable explanation.

“When we approach the foot of these cliffs, it is readily seen that these masses of rock, referable geologically to the cretaceous formation, present horizontal beds of somewhat various structure and composition; some of the layers are more susceptible than others of being attacked by the atmospheric agents which degrade and eat into their exposed surfaces, whilst the harder intervening layers resist better, and remain as projections.



LES EYZIES.

Hence result the projecting ledges and the long hollow lines, which necessarily correspond on the two sides of the valley, and suggest at first sight the action of water.

“Passing near these cliffs, after a thaw, one may see that thin flakes and films of the rock scale off from the beds where the hollow flutings are being formed; and these scalings accumulate all along the foot of the escarpment, where they are sometimes reconstructed as

solid masses by the effect of calcareous infiltrations of the percolating water (see diagram on p. 16).

“As for the upper cornices, the bed which supports them being continually diminished by weather, they project horizontally, sometimes far forward ; and when by their own weight they are forced to break off, they fall and lie at the foot of the cliff, where some may be now observed that have been lying there for centuries.”

Such being the peculiar structure and method of degradation of these cliffs, certain conclusions may be arrived at of extreme importance for the history of primitive man.

Firstly. These natural shelters, of overhanging stone roofs, near water, would inevitably be seized on as dwellings by the rude inhabitants of this region. Indeed, they would obviously attract to them the first men who set foot in this portion of Gaul. These men found ready-made houses, dry, requiring only a mat before them to convert them into cosy habitations.

They were close to the river, where not only could the natives obtain drink for themselves, but to which the wild beasts would come to slake their thirst, and where therefore they could most readily snare or shoot them.

Secondly. As every frost flakes off films from the roof above, every winter would see a layer of fine lime laid upon the remains of the feasts of these colonists, or mixed up with them. Little by little, not only would the rubbish cast aside by the occupants of these shelters accumulate about them, but this rubbish would be buried by the lime flakes from above.

Thirdly. As these deposits grew in amount and height, fresh habitations and hearths would be erected on the top of the primitive mass of refuse ; and this process would

be continued until these rock shelters ceased to be used, and that is not yet, in all cases, for peasants still live under the natural roofs, and daily add to the mass of débris beneath their feet.

Lastly. The fact of the burying matter being lime is important. For lime will extract nothing from bone save its gelatine. Consequently, every split bone, cut, carved, or scratched horn, that was dropped in these shelters is preserved absolutely perfect to the end of time. This would not be the case were vegetable matter to come in contact with bone; that would greedily lay hold of the lime in the bone, and resolve it to nothing.

Consequently, we have in these shelters an unique treasury, in which may be read the conditions of life of men from the first settlers to the present day.

We learn something more; by the bones preserved we ascertain what were the animals contemporary with these first settlers.

We can trace these remains of primeval man all the way up the Vézère to Brive. It is the same on the Lot, on the Tarn, on the Dordogne; the relics abound up to a sharply defined point, and above that, if found at all, are found associated with tools and weapons of a later epoch, and belonging to another race of men.

Why is that? Because the whole mountain mass in the centre of France was covered with ice, and primitive man could not mount higher up the valleys than the point where the glaciers stood. I do not assert that there were no men in France before those whose remains we are about to consider. On the contrary, there probably were, and their rude stone axes, or *coups de poing*, unhafted, are found in the river gravels of the Drift period. These were probably used for breaking the ice to make holes through

which seals and fish could be caught. Many of these stone choppers have obviously been rolled, and belong to an epoch when there were great floods. Now one thing certainly established by the relics on the Vézère is, that the river did not swell to a vast volume. The shelters have not been flooded, and some of them are little above the level reached by the river now in rainy weather. The glacial age was one of abundance of rain, and the glaciers gave birth to immense masses of water, which deposited the characteristic alluvial beds of the tertiary period. Other rivers, such as the Somme and Seine, which did not issue from glaciers, nevertheless poured down great volumes of turbid water. To this period doubtless belong the earliest weapons and tools found, convex on both sides, and rudely chipped, with a heavy end for the hand to grasp, and the other more or less pointed. Such are the axes, so called, of the St. Acheul or Chelles type. It is obvious that we could not expect to find deposits of this age in the caves of the Vézère, for at this period the water brimmed in the valley bed. To the glacial age succeeded one of less rain, and of the shrinking of the snowfields. To a climate very moist, favourable to the vegetation on which the great pachydermatous creatures fed, succeeded a climate more cold, in fact, but far drier; it was the epoch of the reindeer. The mammoth became more scarce, and creatures that live in cold zones multiplied, as the reindeer, the saïga antelope, the glutton, and the lemming. It was precisely at this period that the first deposits were made by man in the caves of Périgord and Quercy.

At this time not only were there beasts that belong to a cold region, but also others that have their homes in the south, and still survive in Africa, or in Asia, or in

America. Such are the cave lion and hyæna, which have retreated south; such the Canadian stag, the musk ox, and the great bear of the Rocky Mountains—now extinct save in the New World. Such also the saïga, now only found in Asia.

As already intimated, peasants are at present actually inhabiting houses that stand on the top of the relics of primitive man, lying beneath their feet as a great book of history; and the men of to-day after every meal cast down their picked bones on the floor of earth, to form another page of this volume. They drop sous as well, which are trampled in; and if we cut clean down through their floors to the level of the

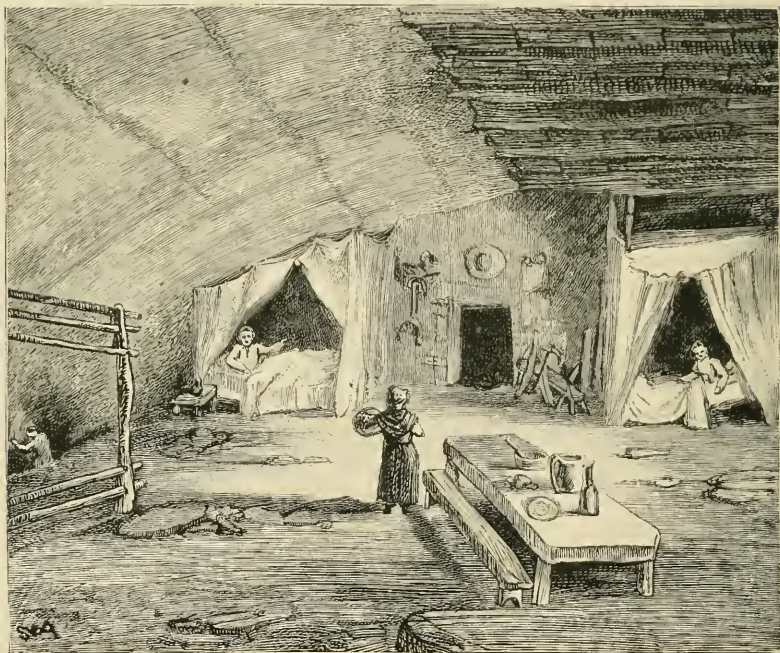


LA LAUGERIE BASSE.

river, we traverse the pages of the history of the human races that have lived on the Gallic soil from the present to the beginning. By the side of the bed in which sleeps the peasant Del Peyra, such a cutting has been made by the veteran explorer M. Massénat. It descends 40 feet, and passes the whole way through historical and prehistoric strata.

The house in which this excavation has been made

is at La Laugierie Basse. It consists of a wall built up against the rock which overhangs and forms the roof and ceiling of a house that consists of a single storey. The curtains of the bed are attached by crooks to the living rock. The floor is of earth, a bed of relics of ancient



INTERIOR, LA LAUGERIE BASSE.

feasts. There is but one window to admit both light and air, and that is unglazed. One door at the end affords means of egress and ingress. There is a hearth built up of rude blocks, and the smoke rises to the rock ceiling, and trails along it, and escapes where it slopes up beyond the curtain wall.

As water in rainy seasons trickles down the face of

the precipice and will run into the cave, a groove has been cut in the face of the rock above the curtain wall, so that the water may drip outwards instead of gliding inwards.

Now if the floors of these shelters were composed only of what flaked away from above, and was cast down by the dwellers in them, a clean cut through them would be a simple matter. But such is not the case, because of the tendency of the unsupported rock to give way. Consequently the floor at the base of the cliffs is piled up with accumulations of rock that has fallen from above; and these rocks are of various dimensions—some are large as a village church, others of the size of a hayrick. The beds, therefore, are made up of these rocks mingled with the relics of human occupation, and it is not easy to determine in all cases whether the overhanging ledges have fallen in and crushed the deposits of men, or whether men have taken up their residence among the fallen blocks and have filled their interstices with their refuse. If the 40 feet of deposit was one of kitchen rubbish only, then we should have evidence of prodigious antiquity. Antiquity of great age there is, and continuous occupation there has been, but 40 feet represents the mixed element of fallen-in roof and of relics of feasts.

For the same reason we cannot say that all the remains at one level, say 20 feet above the river, belong to one epoch, and all those at another, say 10 feet, belong to another, centuries earlier, for it is quite possible that on the fall of a huge ledge to the level of the river bank, leaving a convenient recess under it, a comparatively late generation of savages may have seized on it, and that thus their remains may be discovered at a lower level, though not subterposed, than others which are undoubtedly more

ancient. We can only judge of the succession of civilisations where we find one superposed on another.

In making an excavation, the greatest possible care has to be taken not to confuse the strata. A trench is the worst possible method that can be adopted, but unhappily it is that to which recourse has chiefly been had. It is vicious for this reason, that inevitably portions of the sides fall in, and then the spade of the workman throws out together tools of bone or flint from a deep cutting that have really tumbled in from a high level. The only scientific and satisfactory method of proceeding is that of slowly and cautiously removing the deposit layer by layer, a proceeding arduous and costly, no doubt, but the only one that gives convincing results.

At La Vache, a whole range of overhanging cornice has fallen. On the top of this mass of ruin the modern hamlet is constructed. Below the line of stones are the hearths and refuse of the reindeer hunters, crushed into a sort of breccia by their weight. Any one may creep underneath and pick out with his knife from the compacted mass a flint flake or a scraper, a broken spear-head, horse teeth or fragments of reindeer horn, mingled with ashes. On a rainy day I have thus spent many an hour.

Let us now see what is the story of man revealed by this great contemporary chronicle.

At the period when the glaciers were beginning to retreat,¹ and a colder but drier period set in, then a people—very probably the same which had lived during the glacial period—took possession of these rock shelters, now no more covered by the turbid floods discharged by

¹ The great epoch of the glaciers was by no means one of intense cold. The enormous amount of aqueous condensation produced the glaciers.

the glaciers. They were very much like the Esquimaux in their manner of life, but were larger in build. They wore skins of beasts when outside their hovels, and threw them off when they returned home. They were unacquainted with pottery, and had no domesticated animals. They hunted the horse and the reindeer. They had not even the docile dog as their companion. We know that, because the bones strewn about their hearths are not gnawed. With fire they were acquainted, and fire they obtained out of iron pyrites and flint struck together. To make a hearth, they took a broad flat stone, and kindled a fire thereon. About such hearths they sat, and ate their food, meat—they had no grain; and they cast the bones round them when they had picked them, split them and extracted the marrow. Reindeer jaws there found have one or two of the back teeth struck out, so that the marrow in the jaw might be extracted by suction. Horses they knew simply as beasts to be hunted and eaten. At Solutré in Saône-et-Loire there are literally walls of horse bones about the primitive hearths, and horse teeth abound at La Vache. Of the horn sockets in the reindeer skulls these men made paint-pots, which they filled with red ochre, and therewith they daubed their cheeks. These paint-pots, still stained red, have been found among the débris. These men had no acquaintance with metal. All their weapons and tools were of flint.

Of this material they made their spear and arrow-heads, and their scrapers. These were flat on one side, rounded on the other, coarse and rude of make. The scrapers were employed for cleaning skins, to be used for clothing. The skins were dressed, precisely as they are at present by the Esquimaux.

The process is thus described by Mr. C. F. Hall :—
“The Innuits busily employ themselves in the preparation of reindeer skins for dresses and bed coverings. First they scrape the skin by an instrument called *sek-koon*. This instrument is about 6 inches long, including the handle, and is made of a peculiar kind of whet or oil-stone, or else of musk ox or reindeer bone, or of sheet-iron. The second step is to dry the skins thoroughly; the third to scrape again with the *sek-koon*, taking off every bit of the flesh; and the fourth is to wet the flesh side and wrap it up for thirty minutes, and then again scrape with the *sek-koon*; which last operation is followed by chewing the skin all over, and again scraping and cross-scraping with the instrument.” These laborious processes Hall describes as resulting “in the breaking of the skin, making the stiff hide soft-finished like the chamois skin. The whole work is often completed within an hour.”¹

The vast numbers of scrapers found show how large a portion of the work of the women at home in the rock shelters consisted in preparing the skins for clothing.

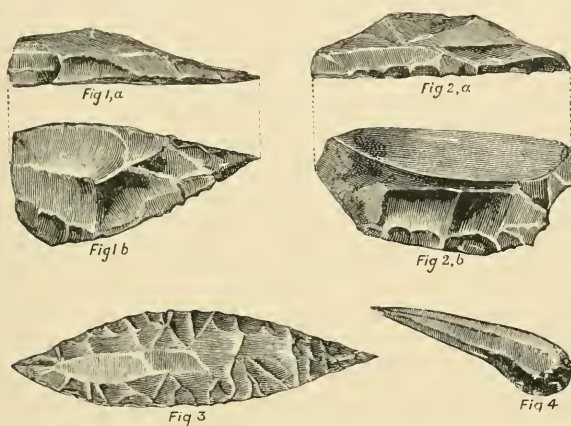
The instruments of the primary period in the rock *abris* are of the rudest character, and are given the designation of *Mousterian*, after the cave at Le Moustier on the Vézère, where they were first observed.

It does not follow that all coarsely fabricated tools of this type are of the same date. In later ages, and in more advanced stages of civilisation, there were clumsy as well as skilful workmen. But what characterises the Moustier period is the absence of the finer weapons and tools. These latter are not found in strata of the kitchen refuse of this epoch, whereas rude tools may be found in later deposits along with those of superior quality.

¹ Hall: *Narrative of the Second Arctic Expedition*, 1879, p. 91.

A word relative to the caves of Le Moustier. This village lies higher up the river than Les Eyzies, and has an interesting Romanesque church.

Here the cliff rises above the village in stages or terraces that are cultivated, and then shoots up abruptly. In total height the crag stands 62 feet from the river. In the upper portion is a spacious cavern, but this has yielded no remains. It was probably cleared at the period of the European wars for the manufacture of saltpetre.



FLINT TOOLS.

Fig. 1. Moustier spear-head. Fig. 2. Moustier scraper. Fig. 3. Solutré spear-head. Fig. 4. Solutré scraper.

A little farther down in the same cliff is a smaller cave, that escaped the observation of the saltpetre diggers, and again, at the base of the cliff is a third, of less consequence. These caves were first examined in November 1863, by MM. Lartet and Christy; and here it was that they found the beds of rude implements that have given their designation to the type. That above this deposit others of a finer quality were found, cannot be doubted. In 1893 I found the remains of MM. Lartet and Christy's

diggings strewn over the vineyard below, and even the village street, which was black with flint. I picked up several scrapers of the later Magdalenian period, and procured as well a *coup de poing* indistinguishable from those of the earlier Drift period.

Such then was the first epoch of civilisation after the glacial age had passed, and the floods had abated. Then came a great stride forwards, and we reach the epoch of *Solutré*.

Men had become more skilful in the treatment of flint. Instead of hammering the stone into shape, they flaked it. This was done by putting a stick against the breast fixed horizontally, or on the ground held vertically by the feet, and bringing the flint core with a jerk against the point; when a flake was shot off that served admirably as a knife.

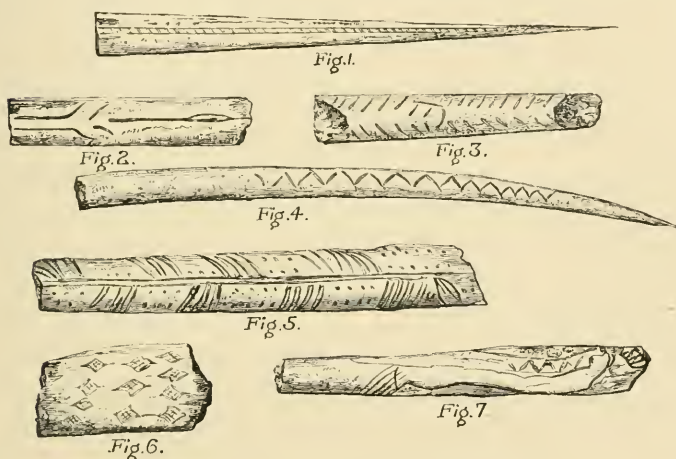
The savage, having got his weapon into rough form by flaking, next proceeded to trim it into perfect shape by light taps round the edge.

Moreover, at this period he affected an entirely original form of spear-head, in outline like a bay leaf, pointed at both ends.

These weapons are beautifully fashioned; great numbers of broken ones, points and pointless portions, were formerly got at Cro-magnon, on the opposite side of the Vézère, and are still obtained at La Vache Haute. The finest Solutréan weapons and tools are found at Bourniquel, at Badegoule, near Beauregard, and at Pey-de-l'Aze, in Bourdeilles. Some of the spear-heads and knives of this period were obviously fitted into wooden or bone handles. Superb specimens are in the Périgieux museum. Weapons of this epoch are convex on both sides; those of Le Moustier are convex on one side, flat on the other,

but the *coups de poing* supposed to belong to the Drift were worked on both faces.

Recently a most interesting deposit of the latter end of the Solutré epoch has been discovered in an *abri* hitherto disregarded in the Gorge d'Enfer. It was excavated by M. Massénat in 1892. It yielded beautifully worked Solutré spear-heads, with the novel feature of a cleft from one end down the middle for the advantage



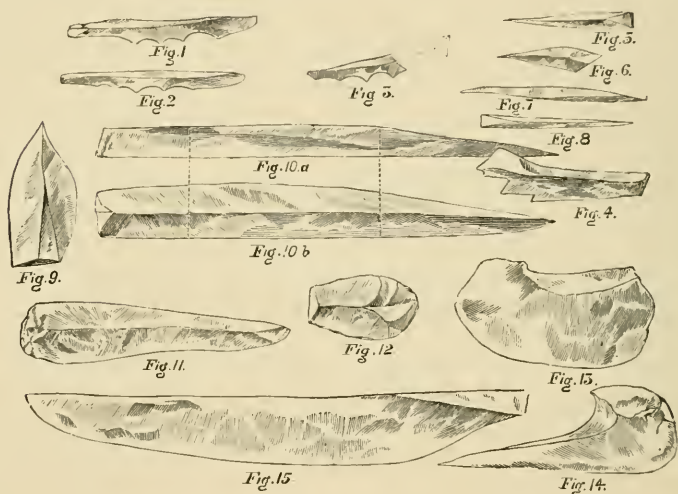
SPEAR-HEADS, ETC., OF BONE AND IVORY.

of obtaining a better fastening into a handle. The shaping of such a weapon exhibits an extraordinary dexterity and patience. Hundreds must have been broken in the manufacture before one that was perfect had been turned out.

We come now to the next revolution in the making of arms; and this is called the Magdalenian epoch, or period of *La Madeleine*. This was due to the discovery that bone served a better purpose than flint. The stone was no longer employed as a weapon; spears and arrows

were tipped with sharpened points of ivory and bone, and harpoons were also made from the same material.

The scraper at the same time received a new development. It was employed, not only for the cleaning of skins, but also as a tool for the manufacture of bone and ivory articles. It was therefore reduced to delicate proportions, and made of varied shapes to suit the new requirements. Some have the usual convex edge, others



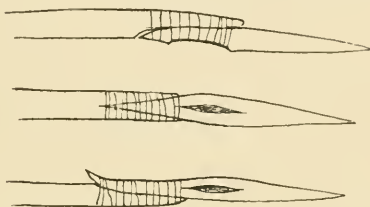
FLINT SAWS, KNIVES, BORERS, NEEDLES, MADELEINE PERIOD.

are trimmed down one side only; some are shaped at both ends; some have a semilunar concavity in one side, so that a bone may be scraped by it.

Moreover, saws and borers were made out of flint for the purpose of working ivory and bone.

At the same time, there was advance made in civilisation in other particulars. The women made nets for fishing, probably of birch fibre, and a shuttle has been recently discovered with a fish sketched upon it.

The savages of this period also used poison for their arrows. The bone points clearly indicate that, having the hollow receptacle for it. The poison employed was probably blood in a condition of putrefaction, over which some gum or glue was spread. The bone points are notched for the wooden shafts. The following sketch is taken from some in M. Massénat's



BONE ARROWS OR SPEAR-HEADS WITH
POISON-HOLLOWS, AS FITTED IN
SHAFTS.

collection, which he has mounted in order to show the manner in which they were employed.

Moreover, the most beautiful needles of mammoth ivory were made, and eyes bored in their heads. Some of those discovered have had the original eye broken, whereupon a second has been drilled a little lower down. The thread employed was the sinew of the reindeer.

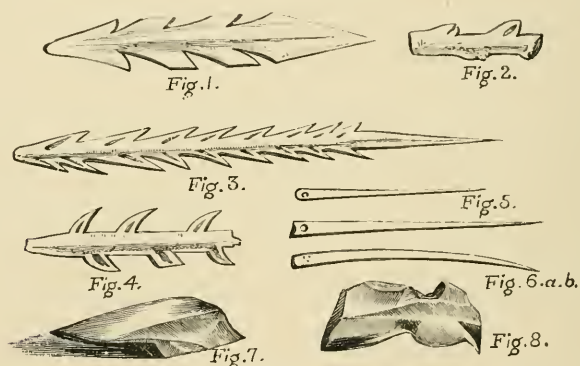
If the reader will look at the accompanying sketch of a flint borer (Fig. 8) for making needles, from the collection of M. Philibert Lalande, which he kindly suffered me to sketch, he will see how ingeniously these people of the primeval world worked.

The tool has two notches in its sides for the purpose of scraping a bone: one is larger than the other, and reduced the bone to an approximately serviceable size, then it was finished and pointed by the lower notch, and finally the eye was bored with the curved point or beak.

I give also a knife from the Lalande collection. Fig. 7 is chiefly interesting by reason of the thumb depression on the lower side, so that the tool can be grasped and held securely during a delicate operation.

Knives of flint have very generally a notch or rebate in them for the bone handle. They also frequently give indications of hard usage by the breaking of the cutting edge.

The saws must have been difficult to make; yet saws wonderfully fine have been found. They were manufactured by touching the edge of the blade with a red-hot point, when a portion of the flint sprang away. All saws had a plain end that was fitted into a handle, and nearly all are broken precisely where we should expect that they



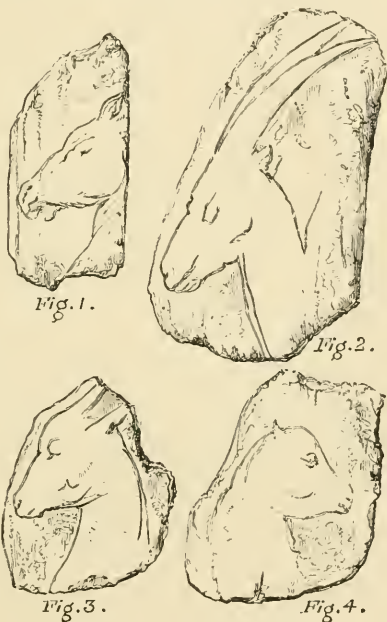
BONE AND FLINT TOOLS.

would give way, at the place where the blade emerged from the haft, and the snapping is always diagonal.

Sea shells of elegant shape and pretty colour were brought from the Bay of Biscay or the Mediterranean, and were bored so that they could be suspended as necklaces, and others were attached to the dress to ornament it. *La femme est toujours coquette*. Face-painting, as already said, was practised. Little mortars have been found, as well as the horn paint-pots; and in these the oxides of copper and of iron were ground. In the grottoes of Mentone skeletons have been disinterred with

the red oxide thick strewn over the heads, so that apparently in death red daub was applied to the pallid face to give it a fictitious look of robust life. But the most striking feature of the palæolithic man was his artistic faculty. With a sketcher of flint, finely worked to a curved point, a primeval man amused himself in delineating on the jaw of a reindeer, or a thigh bone, such animals as he pursued in the chase, and his skill in representation of the mammoth, the reindeer, the bison, the antelope, and the horse, is really wonderful. The horse he hunted was a large-headed beast, much like the modern Icelandic pony.

We will now go to another part of the country, and we shall find there much the same.



ENGRAVED BONES, LA LAUGERIE BASSE.

At about a mile above the junction of the Célé and the Lot, near the railway station of Conduché, rise magnificent precipices of limestone in fantastic forms, reminding one of pictures by Gustave Doré. Here we come on a series of caves. Of late years a departmental road has been carried up the Célé valley, and has destroyed or buried the deposits of the primeval man, which were numerous at this spot. M. Bergounoux, schoolmaster at St. Géry,

discovered these stations before the road was made. Being a man of straitened means, he was unable to carry out the exploration in a very systematic manner. Nevertheless, he made valuable discoveries, and he has published an account of his finds in a book issued at Cahors in 1887.

Another *abri* is that of Cambous, in the Célé.

"It is a simple refuge," says M. Bergounoux, "where, without being completely sheltered from the weather, the primitive man could be in some security against surprise by storm. A field cut by the road descends insensibly to the Célé, whose limpid waters flow a few metres farther on. On this *emplacement*, and chiefly on that portion which is backed by the crag, a family, or possibly a tribe, set up its workshops. There, for a considerable period, a laborious

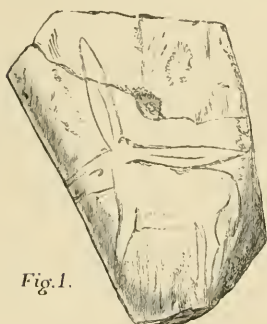


Fig. 1.



Fig. 2.



Fig. 3.

ENGRAVINGS ON BONE.

Fig. 1. An ass. Figs. 2. and 3. Reindeer.

industry was carried on under the open sky. Numerous reindeer horns testify to the activity of the hunters who lived here.

"A careful scrutiny of the locality, and of the objects exhumed, allows us to picture the aspect of this ancient human station. Under the screen of rock are to be found quantities of barbed arrow-heads, needles, spear-points, etc.,

of bone. Outside the shelter these people worked at the flints. Many blocks of stone seem to have served as seats. Some of the men squatted cross-legged on the soil, working diligently, their minds tranquillised by the beautiful landscape before them. Hither and thither ran the women and the children, making a considerable noise. The former had not only the care of the infants, but also the preparation of the meals.

"The hearths are very numerous, and the ashes form



Fig. 1.

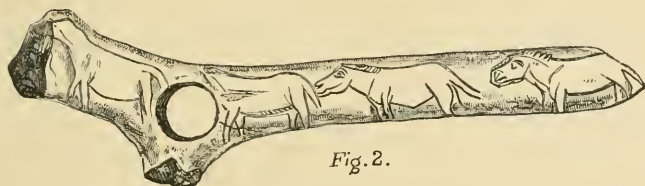


Fig. 2.

ENGRAVED BONES.

a bed that extends for some distance from the base of the cliff almost without intermission. Probably the fires were kept in by night, as well as by day, to ward off the wild beasts. The shelter—that is to say, that portion sheltered by the rock—was probably extended artificially by means of tents of skin, even by rudimentary huts. Possibly, numerous cabins, back to back, covered the space now black with hearths, and in that case, this represents a congeries of fires forming a sort of village."

M. Bouscary was the first to observe this station.

"The first search was unhappily very hasty. Many

objects were broken and their fragments dispersed. Nevertheless, the harvest was rich. The flints were so numerous that he was able to carry off a sackful."

The reindeer hunters certainly went to the Causses for the summer, for their remains are found in the caves there, not only their flint tools,—and, be it remembered, every piece of flint found on the Jura limestone has been brought there from a distance,—but also their harpoons.



Fig. 1.

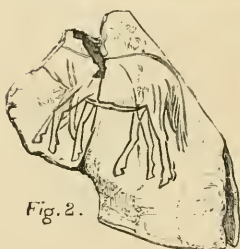


Fig. 2.



Fig. 3.

ENGRAVED BONES.

Fig. 1. Reindeer. Fig. 2. Horse. Fig. 3. Reindeer from Thayngen.

Now there is no water on the plateaux, consequently these fishing implements were simply carried away by their owners lest they should be stolen if left in the caves by the river-side.

We come now to the question, What sort of men were these, physically and intellectually, who occupied the rock shelters, and have left such enormous masses of their remains? There are two schools of anthropologists; and each makes a different answer. One school, the head of which is M. de Mortillet, will have it that the first men

were low-browed, heavy-jawed creatures, with protruding gums and teeth, of a bestial character. Here is the description given of them by the most recent exponent of this doctrine: "The human creatures (of this period) are seen to be exchanging ideas by sounds and signs,—not by true speech; by chattering, jabbering, shouting, howling, yelling, and by monosyllabic spluttering, sometimes by hilarious shouting (not true laughter), stentorian barking or screaming, or by the production of semi-musical cadences. . . . Some of the female adults are seen to be nursing or suckling hairy infants. . . . Some are more bestial, dirty, and parasite-infested than others; decency—or what is termed decency—is unknown; some are clean, others very dirty, perhaps with blood-stains round the mouth and on the hands. If friends get badly hurt by beasts of prey or by accident, such injured companions are hunted away, or killed as soon as possible. Fever patients, consumptives, the blind, the half-blind, and fractious children are driven off and killed. Primeval man . . . did not bury his dead, and our remote precursors probably paid no more attention to a dead human being than a dog now pays to the dead body of a fellow-dog."¹

Not an attractive picture. Let us see on what it is based. In 1700, Duke Eberhardt of Würtemberg, in digging in a *Roman* camp at Cannstadt, found a skull; and it lay for 137 years in the museum of Stuttgart before it was noticed as curious. The skull is low and long. There is absolutely no evidence to show that it belonged to the earliest known race. It was found, as already said, in a *Roman* camp.

¹ Worthington C. Smith, *Man, the Primæval Savage*, p. 51. London, 1894.

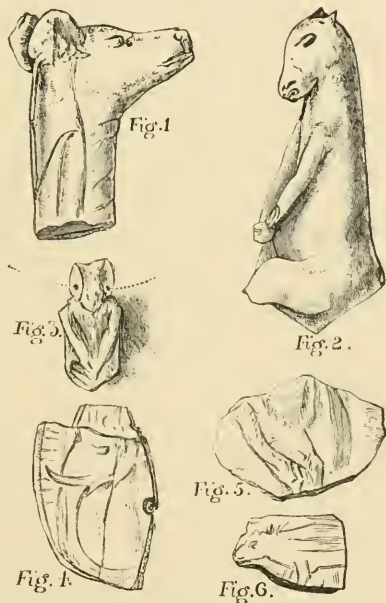
In 1857 a similar skull was discovered in the Neanderthal, near Düsseldorf. It was found by workmen, not exactly in a cave, but in a cleft that had communication with the open air above. There was absolutely no evidence to show to what age it belonged. It was remarkable for its enormously developed brow ridges, its great posterior development, and the depressed forehead.

More recently, two skeletons have been discovered at Spy, in the province of Namur. The skulls belong to the same type. Both of these presented signs of interment. Although they probably belong to the earliest race, this is by no means certain.

Against the view of the bestial character of the first men, based on the structure of these skulls, which is *assumed*—assumed only—to represent the earliest type of man, another school of anthropologists produces evidence which ought to weigh against arbitrary assumption.

At Mentone, in the caves of Baoussé-Roussé (1870-75), M. Rivière discovered the remains of men of the earliest age, interred under absolutely undisturbed beds of kitchen refuse and flint tools sealed up in stalagmite. In 1884 another skeleton was found. One found by M. Rivière was at the depth of 12 feet 3 inches. One was even deeper, 27 feet 4 inches. More recently, in 1892, three more have been found, but these last were dug out by unskilled hands. M. Rivière's excavations were carried on upon the scientific method of removing the surface film by film, from the entrance of the cave to its extremity. Consequently, the possibility of mistake could not occur. The men thus laid at a great depth were not only extraordinarily tall individuals, but had well-developed heads. The tools and weapons found with them belong to the

type of Le Moustier, and of La Vache, or La Madelaine.¹ There was absolutely no evidence of these being later interments, as the layers of palæolithic deposits above them were undisturbed. In 1872 M. Elie Massénat was exploring at La Vache in his burrow beside Del Peyra's bed. He had to dig a tortuous course in and out among the fallen masses from the roof, and the passages he cut wind and dive in a manner difficult to follow, and that not without danger. Below a fallen stratum of rock he came upon an undisturbed bed of charcoal and the relics of the reindeer hunters' feasts. The layers were horizontal, save where masses of stone falling from the roof had crushed them. On this bed he came upon a human skeleton. Aware that he had made a most important find, he immediately telegraphed to the Anthropological Society at Paris to send down a commission to examine the skeleton before it was further touched. The



IVORY AND BONE CARVINGS.

Fig. 1. Head of a Deer. Fig. 2. Squirrel.
Fig. 3. A Bat. Fig. 4. An Elephant.
Fig. 5. Portion of a Reindeer.

¹ It is somewhat surprising to find Mr. Worthington Smith speak of the "neolithic giants of Mentone." The uninitiated may perhaps need to be told that there were two stone ages—that of the reindeer hunters is palæolithic, *i.e.* old-stone, that which succeeded is neolithic, *i.e.* new-stone.

commission consisted of M. Cartailhac, M. Ph. Lalande, and M. E. Massénat. The earth was now carefully removed from the bones, and the entire figure exposed. It consisted of a man with his hands up to his head, in a crouching position. A great stone had fallen and crushed his spine, another had crushed his thigh. Some cowrie shells, pierced, were found about him, the remains of ornamentation on his fur garment. M. Cartailhac, after careful examination, drew up a *procès-verbal* with his own hand, to the effect that there was no evidence of posterior interment. The man



THE CANNSTADT MAN.

THE HUNTER OF THE
VÉZÈRE.

had been struck down and killed by the falling in of the roof over his head.

Now, considering the depth at which this man was found, and the fact of the blocks of stone lying above him, it was rendered evident that here was one of the men of the palæolithic age lying on the bed of tools of his own manufacture; the contemporary of the hairy elephant and the cave lion.

The prehistoric archæologists who follow M. de Mortillet were much disconcerted by these discoveries *in situ*, and they have done their utmost to discredit M. Rivière and discount the find of M. Massénat.

If we consider the depths at which these bodies were found, and the solemn assurance of the discoverers that the superjacent remains were palæolithic for many feet, we must admit that the case is very strong against those who would have the Cannstadt type of man to be the earliest. As M. Massénat said to me, "The head of the crushed man was as good as mine or yours."

The visitor can go down the excavation in Del Peyra's house, at La Laugerie Basse, and see where the crushed man was found, and can pick out with his fingers relics of palæolithic tools and meals in beds many feet above where the crushed man lay; and if he comes away with the conviction that this was a case of late interment, in neolithic times, he must either be extraordinarily prejudiced, or must find evidence as yet invisible to such acute and experienced eyes as those of M. Massénat.

We have some corroborative evidence in the representation of a hunter of a bison sketched on a bone by a man of the period; and I have somewhat enlarged the head from this sketch, in order to allow the reader to judge for himself whether the man who scratched the portrait of his fellow-hunter considered him to be one of retreating forehead, long head, and prognathous jaw.¹

As far as evidence goes, the primeval man of the Vézère was finely developed, with a well-formed head, and plenty of brain power. Men of the Cannstadt type may have existed here and there, but there is no proof that they were not later arrivals. They may have been

¹ It is *said* that at Grenelle, near Paris, in the alluvial gravels, a head of the Cannstadt type was found at a lower level than one of the reindeer hunter skulls. Further evidence is desirable. I am convinced that certain anthropologists accept as facts, to serve their own theories, very hasty, and in some cases erroneous, observations, and put aside resolutely all established facts which do not fit in with their theories.

mere "sports," and they exist to the present day. One dined at table-d'hôte with me, at Brive, and as he was a commercial traveller for a Bordeaux wine merchant, I presume he had intelligence of no low order, in spite of his retreating forehead, huge brow ridges, and bestial prognathism.

The primeval man of the palæolithic age was no cannibal. There are no bones at La Vache of human beings found split for the extraction of the marrow.

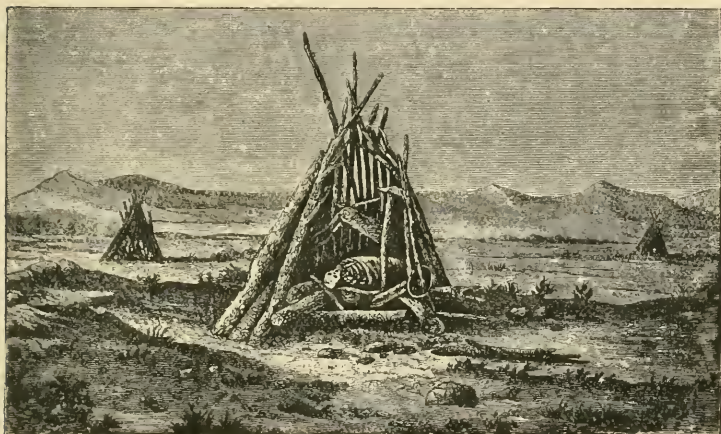
No certain cases of interment have been found on the Vézère; but the men of Mentone belonged to the same epoch, presumably to the same race, and they buried their dead.

The remains of four men have been found by M. Massénat, but the bones were dispersed. Now, to explain this, there is no necessity to rush to the conclusion that the reindeer hunters paid no respect to their dead. I have seen quoted in a work on prehistoric anthropology a statement by Captain Hall that the Esquimaux are indifferent to having human bones lying about their summer camps. The writer, having a theory to sustain, namely, that primitive man no more respected the dead than does a beast of the field, quoted only so much from his authority as suited his convenience. There is unscrupulousness among archæologists, as there is among men of business. What Captain Hall actually says is, that the Innuits, like most savages, entertain great fear of death, and will not suffer anyone to die in the igloo or snow house inhabited by the family. On the approach of death the sick person is conveyed to an igloo specially constructed to receive him, and is put within. The door is then closed with snow, and the patient is left to die in solitude. Death in an inhabited hut renders it taboo.

It is deserted by all its inmates, and is never re-occupied.

In all probability it was the same with the reindeer hunters in France. They put their dying kinsfolk into some cave, along with a little food, or built a hut of branches to receive him.

When, after many years, the snow igloo is melted, or the tent of skins occupied by the dead is fallen to complete decay, when wild beasts have attacked the

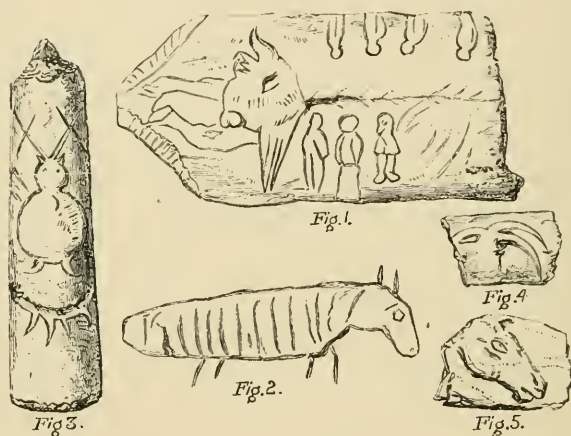


ESQUIMAUX TOMB.

carcase and dispersed the bones, then, but not till then, does the Innuït cease to respect the remains of the dead. So long, however, as the body is intact, it inspires him with awe and veneration. This explains the circumstance that some stray human remains have been found in caves, along with relics of long-continued occupation. Grottoes given over to the dead at one time have been retenanted after the remembrance of the dead there laid had been lost, and the bones had been scattered.

In some of the representations of their fellows left by

the hunters, they are exhibited as stark naked. No doubt but that, like the primitive Esquimaux, as soon as they entered their huts, they stripped. This is essential to health among those clothed in skins, to allow the perspiration to escape. The missionaries in Greenland, by preaching against this practice, have nearly killed off the natives, who die of consumption, because of this interference with a custom which is a necessity of their nature.



ENGRAVINGS ON BONE.

Fig. 1. Head of Bison. Fig. 2. Child's rude attempt. Fig. 3. Fetish.
Fig. 4. Head of Saiga. Fig. 5. Head of Horse.

Had these primeval people any religion? This is a question we are unable to answer. If they were, as is probable, of the same race as the Esquimaux, but not stunted by privation and excessive cold,¹ they belonged to the great Turanian stock, and their religion was confined to fetish-worship. Among their drawings are some repre-

¹ According to Nansen, the Esquimaux are by no means a small people, but the cramped posture in their canoes contracts their legs, and makes them appear shorter than they really are.

sending singular figures like turnips with heads, and strokes forming horns or crosses rising from the crown ; it is hard to say what these can be except fetishes.

One fact not to be passed over in connection with the reindeer hunters remains to be noticed. Their art stands on a different footing altogether from that of all savages, except perhaps the Bushman. Savage art is decorative—of the person, as by tatoo, or of weapons and tools by scratches and dots. But that of the reindeer hunters is genuine art, sprung from a sense of the beautiful in nature. Let any one “look,” says Mr. Andrew Lang, “at the vigour and life of the ancient drawing (p. 162, fig. 3). The feathering hair on the deer’s breast, his head, his horns, the very grasses at his feet, are touched with the graver of a true artist. The design is like a hasty memorandum of Leech’s.”¹ I add, look at the horse (*ibid.* fig. 2). The sketcher was dissatisfied with the position in which he had drawn the legs, and he re-drew them. That shows a discriminative sense, a keen perception of the true and beautiful. I venture to assert that—say in the village of Les Eyzies—there will not now be found two men who could sketch with the skill and freedom of these primeval savages. The large-headed horses (p. 161, fig. 2) are true to nature. The same breed exists in Iceland at present.

Such drawings as that of the heads on p. 159 are not decorative merely,—they are true art, and that of a high quality, such as never reappeared till it burst into perfect flower among the Greeks.

In conclusion, I will add a list of the shelters on the Vézère, near Les Eyzies.

1. La Madeleine.—Exhausted.

¹ *Custom and Myth*, p. 300. London, 1884.

2. Roc de Luc.—A cave, the exploration of which is in the hands of M. Rivière. Not thoroughly examined.

3. Cromagnon.—Destroyed; a house stands where the famous *abri* and the typical skeletons were discovered, but still tools and bones are to be unearthed under the rock at the back of the Hôtel de la Gare, which is close by, and which, indeed, has its stables under the Cromagnon rock.

4. La Laugerie Haute.—By no means exhausted.

5. Les Marseilles.—A newly explored station. A pocketful of worked flints may be picked up there in an hour.

6. La Laugerie Basse.—Far from exhausted.

7. La Gorge d'Enfer.—Here are several caves and *abris*. The largest cave yields nothing. It was cleared out in 1793–95 for saltpetre. The flints thrown out undoubtedly lie in the meadow before it. At a lower level, half buried in the meadow, are two important shelters; higher up on the same side is a large cave; on the opposite side of the valley a large *abri*, partly explored.

8. La Grotte Richard.—Above the factory of Les Eyzies, explored by MM. Lartet and Christy; exhausted.

9. La Combarelle.—On the left bank of La Beune, in a small lateral glen; partially explored.

That there are countless other deposits in the district, as yet untouched, is not to be doubted.¹

¹ For a map of the Vézère, with the *abris*, etc., marked, see the *Bulletin de la Société Hist. et Archéologique du Périgord*, tom. v. p. 384.

CHAPTER X

THE DOLMEN-BUILDERS

The End of the Glacial Age—Change of Climate—The Arrival of the Neolithic Men—The Primeval Dark Race Turanian—The rude Stone Monuments of the Neolithic Men—Found in Central Asia—in India—in Arabia—in Africa—The Western Migration of the Dolmen-builders—The Khasias give us the Clue to interpret these Remains—Lines of Stones—Menhirs—Cromlechs—Dolmens—The Contents of Dolmens—The Neolithic Weapons—Trepanning—Openings in Dolmens—The Dolmen-builders conquered by the Gauls, who were armed with Steel Weapons—Habitations of the Living—Vielchastel—The Subterranean Refuges—Orvar-Odd's Saga—The Dolmen-builders a Turanian race—The great Characteristic of this Stock, Ancestor-worship—Some Branches of this Race attained high Civilisation—Peculiarities of its Customs—Polyandria—Bride-hunting—The *Couvade*—its Significance—The Wearing of Mourning—its Original Meaning—Goddess of the Dead—The Stone Axe—Turanians in Chaldea—in Italy—The Basques, a mixed race—Traces of Turanian Words—Summary of the Ethnology of Gaul.

THE glacial age came to an end. The great central chain and plateaux of France were no longer covered with ice-fields. The reindeer had retreated north; the mammoth had disappeared.

The climate of Europe was become much the same that it is at present. What became of the primitive people? Did they follow the reindeer, or did they accommodate themselves to the new climatic conditions?

That is a question we cannot wholly solve.

But we may well ask, Why should this primeval

people have left? If the reindeer had been domesticated, there would be some reason for supposing that the people had followed a beast which could not endure a hotter climate than that of the subglacial age. But the reindeer was not domesticated, any more than was the horse, it was killed and eaten; and with a milder climate the fauna would become more abundant, and the native savage would not be driven to migrate out of need for food. He probably accommodated himself to the new order, which did not come on suddenly, but very gradually, hardly perceptibly.

In the cave of l'Homme Mort in Lozère, in a ravine of the great central dolomitic plateaux, as many as fifty skeletons were found. The heads belonged to the long-headed, narrow-browed, long-upperlipped, feeble-mouthed, gentle race of the reindeer hunters; but to a date long subsequent to the remains on the Vézère. They used tools of the neolithic age.

Moreover, it is tolerably certain that there were at least two distinct races inhabiting Britain and Gaul before the arrival of the Celt. One was dark-haired and comparatively small, and was represented in Britain by the Silurian; and the other chestnut-haired and comparatively large,—the neolithic man, who subjugated the less cultured dark man with his superior weapons, just as later he himself was conquered by the Celt by means of his weapons of better metal. We have both races represented in legend by the pixie, and by the giant.¹ The latter was

¹ According to Nennius and Bede, there were originally in Britain, Ireland, and Scotland three distinct races before the arrival of the Anglo-Saxons—the Britons, the Scots, and the Picts. Henry of Huntingdon adds that the language of the Scots was that of the people of Navarre, *i.e.* the Basques. He probably blunders, and means that the language of the Picts was similar to the Basque tongue. Tacitus

not really gigantic, but was reputed so because he raised gigantic structures of stone.

One thing is certain, that there was a mixture of races on the soil of Gaul and Britain before the veil is raised and history begins.

It has been supposed, but not demonstrated, that a hiatus exists between the deposits of the palæolithic men in Périgord and Quercy and those of the neolithic men. I do not myself think that such a gap exists, judging from personal observation. I believe that one age overlapped the other.

Throughout Europe we find a sallow, dark-haired, and comparatively small race underlying all the historical strata of men. This is the Iberian, and in Aquitaine it is the predominant race still. To this corresponds the dusky-complexioned, dark-haired people met with in Ireland, in Wales, in Cornwall, in the Western Isles, and in Brittany, a race distinct from the conquering people that overlies it.

This dark-grained people had certain cultural characteristics. They employed tools and weapons of stone

noticed that the Silures of S. Wales spoke the same language as the Iberians of Spain. We can place no reliance on the varied traditions of the successive waves of occupation which we find in the Welsh, Irish, Pictish, and Saxon authorities. All we can safely conclude from them is, that there were marked distinctions in temper and appearance, and that one of these races in Wales (the Silurian), one in Ireland (the Dedannans), and one in Scotland (name uncertain), were dark, and distinct in habits and language from the Celts.

See Skene, *Celtic Scotland*, 1876, vol. i. chap. iv.; Skene, *Chronicles of the Picts and Scots*, 1867, preface, 4. Comparative ethnology gives similar results; Bedoe, *Races of Britain*, 1885.

We know that in Britain there were two waves of Celtic migration; the Gaelic (Gadhelic), which came first, and was the first to drive westward the dark Iberian; and then came the Briton (Cymric or Brython), which overflowed both. The existence of each is marked by linguistic peculiarities.

highly polished, but did not use polished instruments exclusively. They also erected gigantic monuments of rude stone, without shaping them with tools,—at all events at first. They were far in advance of the reindeer hunters, in that they had domesticated animals, the dog, the sheep, the cow, and the horse. Moreover, they understood the manufacture of pottery, which was rude and made by the hand, not turned on the wheel. They cultivated grain, they spun and wove cloths.

This all differentiated them immensely from the people they conquered, who were their superiors in one thing only, the artistic faculty, which was wholly absent in the neolithic men.

The original stock of these rude stone monument-builders would seem to have come from Central Asia. They have there left their remains.

Mr. Atkinson, in his travels on the Amoor, saw some in the valley of the Kora. He there observed five enormous monoliths: "One of these blocks would have made a tower large enough for a church, its height being 75 feet above the ground, and it measured 24 feet on one side, and 19 feet on the other. It was about 8 feet out of the perpendicular. The remaining four blocks varied from 45 feet to 50 feet in height, one being 15 feet square, and the rest somewhat less. A sixth mass, of still larger dimensions, was lying half buried in the ground; on this some young *picta* trees had taken root, and were growing luxuriantly. About 200 yards to the eastwards, three other blocks were lying."¹

From this centre a migration took place south, across the Himalaya, and occupied the greater portion of India, which it strewed with its remains, and where it was subse-

¹ *Travels on the Upper and Lower Amoor*, 1861, p. 178.

quently conquered and crushed out into corners, and driven into hills by the Aryans. In India this people still remains



MENHIRS, VALLEY OF THE KORA.

unaltered, observing their traditional usages, still erecting monoliths and dolmens, and to them we must look for

an explanation of these monuments, but even further for the significance of certain rites and customs still observed by the peasantry in portions of Europe, who have, however, totally lost all tradition of their meaning.

Another great migration of this people was towards the west. They entered Palestine, which they covered with precisely similar monuments. One branch then flowed south, by Petra, into Arabia, where Mr. Palgrave saw monuments like our Wiltshire Stonehenge. From Arabia, by the Straits of Bab-el-Mandeb, they stepped across into Abyssinia, and have there also left their remains, which have been photographed and described by Mr. Bent. From Abyssinia they travelled down the African coast to Mashonaland, where also they set up megalithic monuments, afterwards appropriated by the Phœnicians, and given a characteristically Semitic signification perhaps quite different from that at first attributed to them. From the African coast a stride brought them into Madagascar, where they are still represented by the Vazimbabas, the earliest known race there, entirely distinct from the Hovas and Sakalavas, who look upon these megalithic monuments with superstitious dread, and consider their builders as necromancers.

Another migration, instead of turning south through Palestine, skirted the Black Sea, traversed the plains of Southern Russia, to the Baltic, invaded the Scandinavian peninsula; hugging the sea, rolled on through North Holland into Gaul, crossed into Britain and overflowed the British Isles. The main horde, however, continued its career along the coast of the Channel, spread up the river valleys, doubled Cape Finisterre, ran down the littoral of the Bay of Biscay, crossed the Pyrenees, occupied Spain and Portugal, stepped across the Straits of Gibraltar, and

under the name of Berbers, opposed the Roman arms, and strewed Tripoli, Algiers, and the confines of the desert with their megalithic remains, and are represented now by the Kabyles.

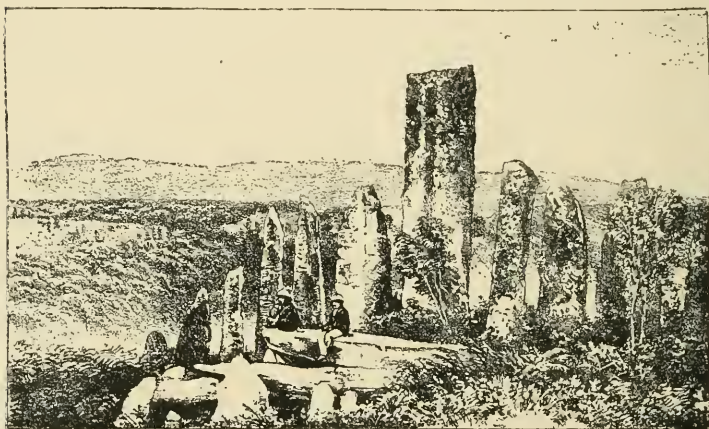
I know that certain archæologists dispute the assertion that the megalithic relics belong to a single race. They would have them to be the spontaneous and independent productions of different peoples, moved by like desires to commemorate their dead or honour their gods. But when we have these erections in touch, so to speak, the one with another, when there are practically no gaps in the line, it is much more probable that they all belong to one migrating people.¹ We can tell nearly what were the thoughts, habits, and superstitions of the reindeer hunters, by studying the Esquimaux, who are very possibly their lineal descendants, stunted by the severity and privations of a polar existence.

¹ They point out that there are certain variations in the type of these monuments. These I believe to be due in part to the material used. Erratic blocks, granite in slabs from weathering, masses of chalk or limestone, materially modify the structures, according to the material employed. Moreover, fashion changed. When incineration was adopted, the need for very large dolmens ceased, and smaller ones were erected. The dolmen-builders were also doubtless influenced by the customs of those with whom they were brought in contact. It is more than probable that these men, after having been subjugated by the Gauls, continued to erect their monuments. It is certain that they did this in Africa under the Roman domination. It is not improbable that their conquerors may have adopted occasionally the practices of the conquered, and have used dolmens for interring their dead, and have offered homage to menhirs.

I do not say anything about Mr. Fergusson's argument in his *Rude Stone Monuments*, relative to the late date of erection of these singular structures. He jumped at conclusions from premises that will not bear what is built thereon. For instance, he makes the dolmen at Confolens a keystone to his argument, basing himself on an utterly misleading sketch. He had never seen the dolmen in question, or he would have perceived at once that he had made a grievous blunder. As an eminent French archæologist said to me, "That book is a standing disgrace to English archæology."

But whither shall we look for the representatives of the dolmen-builders to obtain an explanation of the mystery that enshrouds their monuments? Almost certainly to the Khasias and cognate tribes in India, and to the Vazimbabas of Madagascar.

In the south-western loop of the Brahmaputra is an insulated people, the Khasias, which may be, and probably is, a relic of the dolmen-building race that has migrated south in place of west. They have crowded their land



KHASIA MONUMENTS.

with megaliths, that occupy every height, stand beside every road, and are even found in the villages. They consist of standing stones, often associated with dolmens. These monuments are for the purpose of perpetuating the memory of the illustrious dead, whose spirits are supposed to act as tutelary genii to the family or clan.

“In the upper parts of the Khasya country, monumental stones are scattered on every side. The most common is composed of erect, oblong pillars, sometimes quite unhewn, in other instances carefully squared and

planted a few feet apart. The highest pillar is in the middle, and left and right they gradually diminish. In front of these is what English antiquaries call a cromlech, a large flat stone resting on short pillars. The blocks are sometimes of great size. The tallest of a thick cluster of pillars in the market-place of Murteng measured 27 feet in height above the ground. A flat table stone or cromlech, near the village of Sailankot, elevated 5 feet from the earth, measured 32 feet by 15, and 2 feet in thickness. In other instances the monument is a square sarcophagus, composed of four large slabs, resting on their edges, and roofed in by a fifth. The sarcophagus is often found in the form of a large slab, accurately circular, resting on the heads of many little rough pillars, placed close together, through whose chinks you may descry certain earthen pots containing the ashes of the family. Rarely may be seen a simple cairn, or a pyramid some 20 feet in height. The upright pillars are merely cenotaphs, and if the Khasya be asked why their fathers went to such expense in erecting them, the invariable answer is, 'To preserve the name'; yet to few indeed among the thousands can they attach any name. But the Khasyan word for stone, 'man,' occurs as commonly in the names of villages and places as that of 'man,' 'maen,' and 'men' does in Brittany, Wales, and Cornwall. Mansmai signifies in Khasya the stone of oath, Manloo, the stone of salt, Manflong, the grassy stone, etc. These large stones are frequently formed into bridges for the passage of brooks. There is at Murteng a bridge of this kind, consisting of one stone, 30 feet in length. The method of removing these blocks is by cutting grooves, along which fires are lighted, and into which, when heated, cold water is run, causing the rock to split along the groove. The lever and

rope are the only mechanical aids used in transporting and erecting the blocks.”¹

As these Khasias give us a clue, and almost the only clue, whereby to interpret the remains of the dolmen-builders, I will venture to say a little more about them. Unhappily, we know of them far too little. I must premise that the remains of megalithic monuments are strewn all over India, left there by the prehistoric race that was conquered or absorbed when the Aryan invaders crossed the Himalaya precisely as the same race was conquered or absorbed when the Celts invaded Europe. Vast numbers of these rude stone monuments remain in the Deccan, especially about Hyderabad and Golconda, where the country resembles a magnified Dartmoor, bristling with enormous granite tors. About twenty miles from Hyderabad is a huge prehistoric cemetery, the circles and dolmens of which extend for many miles, and close by is an enclosed village, with a stone mound round it, and circular huts, at least half a mile in diameter, exactly like similar remains of prehistoric villages of the same epoch in Europe. The builders of these are unknown, and the natives have no traditions concerning them.

The Khasia tribe alone remains undisturbed in its traditional usages, and on its old soil, acquired before the dawn of history. They are of Mongolian race, and speak a language entirely differing from those around, as much as Welsh differs from English,—probably more so, as Basque differs from French. Their religion appears to consist in the worship of Nals or spirits, that have to be propitiated. But in this they resemble all the Surinam and Mongolian races, who, whatever religion they profess, are really spirit-worshippers in practice, and the saints

¹ Balfour's *Cyclopædia of India*, Art. “Kasia and Khasya Hills.”

they worship are deceased ancestors, who are malignant. To understand the remains of the neolithic men, we must therefore—if they are to be interpreted by those of the Khasias—think only of the worship of ancestors, and refer all monuments, not to nature-worship, or to an astral religion, but to sepulchral rites.

The skulls of the neolithic period by no means belong to one type. We may conclude, from what we know of human nature and the ways of migrating masses of men, that in their march an invading horde would not exterminate the aborigines, but would convert them into serfs and slaves, and carry great numbers along with them in their forward progress. When a chief was buried, some of these bondsmen were killed with him, that their spirits might minister to his in the world beyond the grave. In a tumulus opened on the Causse de Gramat, in the central cist was found a skeleton extended at full length, and round him, outside, were squatted a dozen skeletons in a ring, undoubtedly slaves slaughtered at the funeral. This will explain the existence in these tombs of different types of skulls.

In many instances the new-comers occupied the caves that had been vacated by the reindeer hunters, consequently their relics lie in a bed above those of the latter. And they sometimes buried in these caves, thereby disturbing the layers of deposits of the earlier race; this has led to a little confusion, and it has been thought that the earliest race occasionally used pottery. There is, however, absolutely no satisfactory evidence that they did. The careful and conscientious excavations of M. Massénat, carried on for thirty years, have shown not one particle of pottery about the many hearths of the palæolithic man on the Vézère; and the caves in the sandstone, explored

by the equally conscientious and painstaking M. Lalande, have confirmed this.

Let us now consider the peculiar remains of the



MENHIR, DARTMOOR.

neolithic man. They are familiar to many of us, for we have them in abundance in the British Isles.

The first we will notice are the lines or avenues of upright stones. The most remarkable in Brittany is the collection at Carnac. In Scotland they are found only in Caithness and Sutherland. There are stone rows in

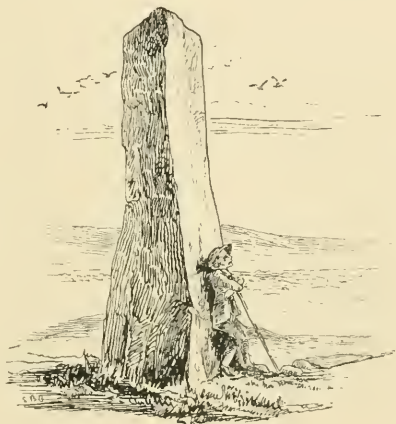
Wales. They abound in Devonshire; they are rare in Cornwall. Few exist in the south centre of France. Of these I doubt if any remain in the district I am describing.¹

Single upright stones, such as are called by English antiquaries *menhirs*, and by the French *peulvans*, still remain. They were no doubt in many cases the leading stone, from which a row of smaller upright stones started, which latter have disappeared.

Henri de la Luzerne, Bishop of Cahors (*d.* 1741), issued an injunction for the demolition of these menhirs, because of the superstitions connected with them.

Nevertheless, several remain. Half a century ago there were as many as thirty-seven in the department of Lot; now there are hardly fifteen. None are very high; the largest is at Gréalou, and measures 18 feet. One at Ste. Eulalie de Larzac is 12 feet 6 inches high.

We must look to India and Madagascar for the



MENHIR, GRÉALOU.

¹ One is said to have occupied the edge of a plateau near Excideuil, and to have consisted of ranges of set stones, two hundred in number, forming a dozen rows. I examined the spot; not a stone remains, and the peasants have no tradition of such a monument having existed there. My own impression is that it was nothing but a natural outcrop of ironstone. Two others I visited I believe not to be artificial at all.

explanation of these monuments. We have already seen that they were set up as memorials of the dead—very often as memorials of dead heroes whose bodies had not been recovered. Among the Khasia the top of the rude obelisk is often daubed with a patch of red, usually circular. In much the same way, in the granite range that divides Bohemia from Bavaria, wooden boards are set up, by the roadside, in the forest, even in the public street, to commemorate the dead. I have seen and traversed a complete avenue of these, half a mile long, near Cham.



DEATH-BOARDS IN THE BÜHMER-WALD.

On top is a circle, just where the Khasias put the dab of red paint, and in this circle the deceased is figured kneeling, and addressing the Virgin and Child, or the Mater Dolorosa,

or the Trinity, in the sky. Below is a double table, on which are inscribed the name and age and virtues of the departed, together with a copy of verses in his honour. It is very probable that in the regions of Gaul and Britain, where no suitable stones to serve as menhirs were available, wooden posts and rows of posts were erected by the dolmen-builders, very much like these Slavonic "dead-boards."

It does not, of course, follow that the Czechs represent the neolithic people, for no sentiment is more universal than that of setting up memorials of the dead, and such memorials are still set up by us—erect slabs in our cemeteries.

These megalithic upright stones, representing the dead, came very naturally to be regarded as being inhabited by the spirits of the dead, and so received a certain amount of veneration as fetishes. The spirit was supposed to have entered into and to occupy the stone erected in its honour, and to leave it occasionally. In the Abyssinian monoliths the door is actually carved on the stone, whereby the spirit might have egress and ingress.¹

Moreover, the dead required food and drink, and the Abyssinian stones have before them slabs in which are cut basin-like hollows to receive the grain and the liquid intended for the consumption of the dead. It is much the same with the North African monuments; they have the tables for offerings before the rude erect stones. In Europe we often find similar slabs, with cup markings on them for the same object.

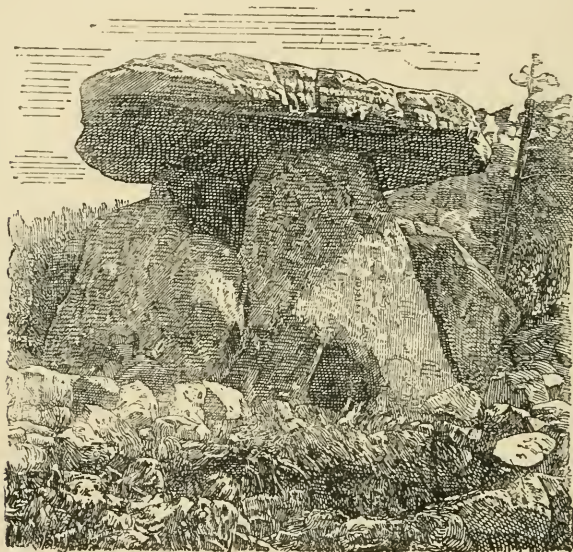
We come now to the circles of upright stones which the French call *cromlechs*. Of these there are two kinds. First, those that enclose a cairn, and these are merely erected to mark its boundary. Distinct from these are the so-called sacred circles of stones standing at intervals, erect, sometimes of great height; and of this the noblest example known is Stonehenge. There are numerous specimens in the British Isles. In the centre of France are some, but not many. One, at Aubazine, in Corrèze, I have carefully planned. Although the local antiquaries are convinced of its prehistoric character, I am not. I believe it to be a modern erection, for the purpose of enclosing a paddock or plantation of fruit trees. It differs entirely in its situation and in character from

¹ There is a hole cut in one at Pouance (Maine-et-Loire), whether original, or cut later to contain the image of the Blessed Virgin Mary, I cannot say.

every sacred circle I have seen ; moreover, it precisely resembles enclosures in process of erection on adjoining farms.¹

Now again, we ask, What is their meaning?

In answer we can only offer conjecture. Every savage and semi-barbarous tribe has its place of assembly and solemn dances ; and these are usually marked round with poles or stones set upright. The sacred circles on Dart-



DOLMEN AT GRAMMONT, NEAR LODÈVE.

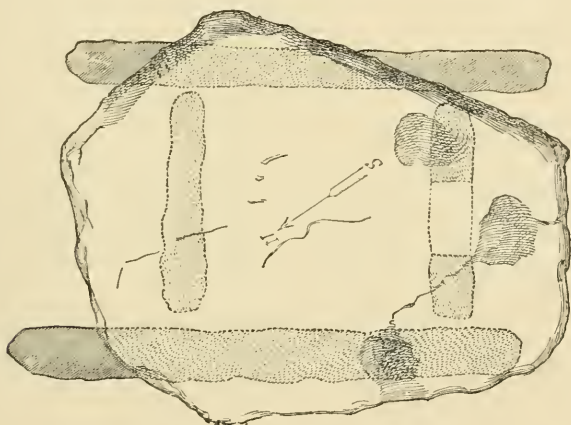
moor and in Cornwall are almost invariably found at a little distance from a village of hut-circles, and the probability is that they served as the place of assembly

¹ In Dordogne, at Razac d'Eymol, is a circle, and by it a dolmen ; at Chavagnac another circle. . At Besse, near Villefranche-de-Belvès, another and a dolmen ; the same at Ste. Enemie on the Tarn. On none of these can I pass an opinion, as I have not examined them. That at Chavagnac, near Terrasson, described in *Matériaux*, 1876, is not a sacred circle, but an enclosure for some undefined object.

for the braves of the community to perform their dances and engage in discussion.

Lastly, we come to the *dolmens*.

A dolmen is what English antiquaries incorrectly call a cromlech; for cromlech means a stone-curve, and therefore properly applies to a megalithic circle. A dolmen consists of three or more upright stones, arranged to form a parallelogram, covered by one or more large blocks that rest upon them. They are rude boxes, and the largest are

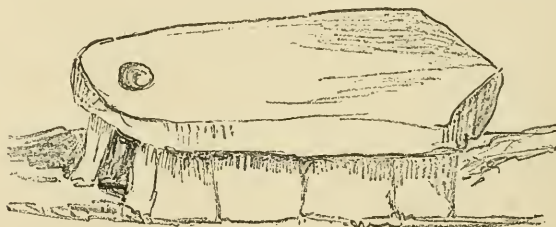


PLAN OF THE GRAMMONT DOLMEN.

called *allées couvertes*, and consist of passages between erect stones covered over by huge flat slabs. The finest examples of these are that at Saumur, the Roche aux Fées, near Esse in Ille et Vilaine, and some still buried under tumuli in Brittany. In Dordogne is only one that can at all range with these, that of Le Blanc, near Beaumont; but of dolmens of less vast dimensions there are abundance.

All these were anciently buried in tumuli or cairns, and all, invariably, were sepulchral. But they were sepulchral after a curious fashion. They occasionally, indeed, served

for a single interment, but generally formed a family or tribal mausoleum; and it has been ascertained that when the bodies laid in them had crumbled away, they, with their funerary implements and ornaments, were unceremoniously thrust to the rear to make room for a new arrival. Thus the most recent interments are intact, whereas the oldest are at the back in a jumble of bones, weapons, and trinkets. It has been found that in a considerable number of cases a body had been deliberately unfleshed before it was laid in its last habitation; that is to say, by boiling or by scraping all the flesh had been



DOLMEN AT LARAMIÈRE (LOT).

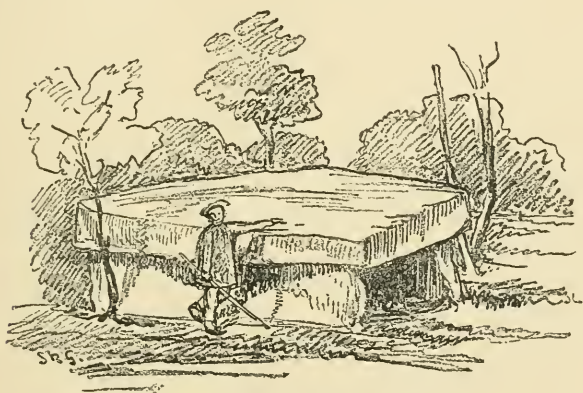
removed previous to interment. This is shown by the mistakes made in arranging the bones, a left arm or leg being placed on the right side of the body, or *vice versa*. Moreover, the marks of the scrapers are on the bones, which are scattered.

How are we to account for this? Very simply. When a brave died at a long distance from the family mausoleum, and it was not possible to convey the corpse to it intact, it was subjected to this treatment, so that his bones at least might be gathered to those of his fathers.

The same explanation serves for the existence side by side of incineration and interment. The burning of the dead was easier than the boiling process; and the burnt brave was more compact and portable than the scraped

one. After a while a fashion for cremation set in among the neolithic men, as it bids fair to set in among ourselves.

In a cairn on the Causse of Gramat a skeleton was found lying at length with a pot on his breast containing burnt human bones. Apparently the husband had been buried, his wife burnt. But one of the most singular interments is that at St. Cernin de l'Arche, near Brive, where a female body was discovered, of which one half, the lower, was buried with its bronze anklets on, and the upper half cre-



DOLMEN AT GABAUDET, NEAR GRAMAT.

mated, and put in a pot at the upper portion of this half-skeleton. The leg-bones were stained green by the bronze ornaments worn round the ankles.

In another cairn at the same place a vast number of horse bones were found outside the dolmen it enclosed. Obviously the dead man had been given his steed to attend him in the nether world. In the museum at Mende is a mass of wax that was found in a bronze platter beside a skeleton in the dolmen of St. Chély-sur-Tarn. Apparently the dead had been supplied with a honeycomb to eat on his travels.

Unquestionably offerings of food and drink continued to be made for some time after burial. For the reception of these, cup-like depressions were scooped in the ground, or on the covering stone, or else a hole was bored in the side of the dolmen, through which the hand could be passed to scatter its oblations over the dead. In a dolmen at Changefége, near Mende, beside the bones was found a quartz slab that had a number of cup-like holes sunk in it for this purpose.

If the reader will refer back to the sketch-map of the Causse de Grammat (p. 39), he will get an idea of how the plateaux are strewn with dolmens.

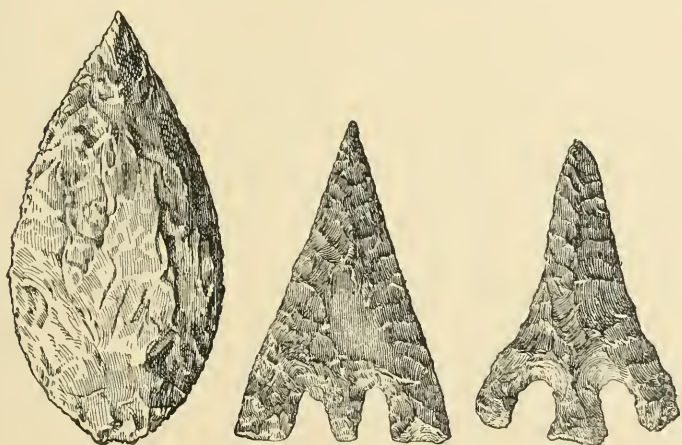
The pottery of the dolmens is red, the shapes are rude, the vessels have been moulded by the hand, and not on the wheel. What ornamentation exists is rudimentary, made with the finger-nail, or with a stick, or by pressure of a cord.

Another thing we learn from the dolmens is that the weapons were different from those of the preceding race. The neolithic men must have expended immense labour in polishing them. But all weapons were not thus treated. At the same time that they laboured to produce highly-polished stone tools, they also exercised great ingenuity in chipping into delicate shapes and in working them in patterns. The stone hammer found at Corwen, in North Wales, is now in the British Museum. It is a really astounding work of art, executed with infinite pains and surprising skill.

“The design of the ornament is peculiar, and admirably carried out, and the labour implied in its execution by mere dexterity of handicraft is well-nigh incredible. There are upon its surface upwards of two hundred separate spaces, each hollowed out to an uniform depth in the centre, and rising towards the edges so regularly as to preserve

the lines of direction of the ridges with perfect accuracy and precision. The stone is so hard that steel will not scratch it, and yet the finish of all the details of the ornament, and the polish of their surface, are perfect.”¹

Of similar beauty and execution are the long translucent flint swords found in the dolmens. They have been skilfully chipped in spiral lines parallel with each other from the handle to the point. The finest I have seen has thirty-nine of these lines. It is in the possession of M.



NEOLITHIC FLINT ARROW AND LANCE-HEADS.

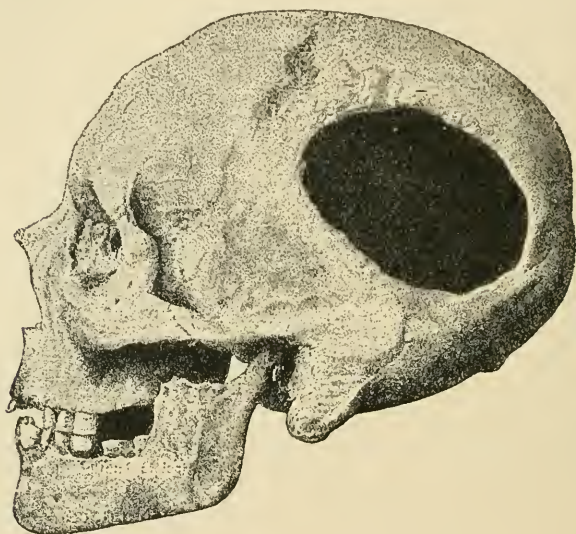
Dols of Tour de Faure, in the department of Lot. The spiral lines occupy one side only; the blade is curved. I have in my own possession a broken sword with this marvellous work on it.

We cannot say that the polished stone weapons belonged to the dolmen-builders alone; on the contrary, many races have traversed the period of culture when stones were ground and polished to make axeheads, etc.

¹ Anderson, *Scotland in Pagan Times: Bronze and Stone Age*, 1886, p. 322.

All we can say is, that the dolmen-builders were in the neolithic condition when they appeared in Europe.

Spindle-whorls of baked clay or pierced stone are found alongside of female skeletons, and prove that these people knew how to spin. Shuttles and weavers' smoothing-stones show that they were also acquainted with the art of weaving.



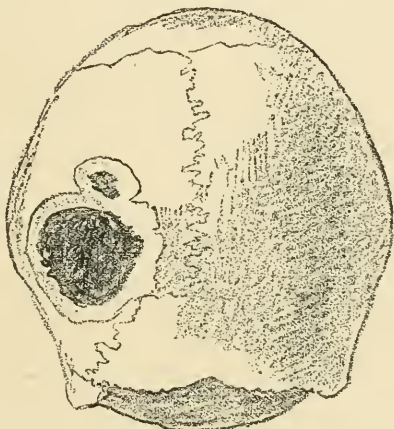
TREPANNED SKULL, FROM NOGENT-LES-VIERGES.
(After Cartailhac.)

After a while, bronze came into use. It was introduced from the valley of the Po, by the Etruscans. At first it was undoubtedly a luxury, and employed only by the chiefs. It gradually became more common, and partly, but never wholly, displaced the weapons of stone.

One very odd custom was prevalent among the dolmen-builders, that of trepanning during life. Of this I have already written at large elsewhere;¹ I will therefore only

¹ *Strange Survivals*. Methuen & Co., 1892.

briefly notice it here. The polished-stone men were apparently under the impression that epilepsy was due to an evil spirit being confined within the skull; accordingly, to relieve epileptic patients, they bored holes in their heads, opening doors by which the imprisoned demon might take flight. All these cases of trepanning were done during life, and done by means of flint tools. In a great majority of cases, those who had been trepanned survived, and were occasionally trepanned again. This practice is not even now extinct. Dr. Boulongue, in his work on Montenegro, gives an account of the practice in the Black Mountain. The Montenegrins have recourse to trepanning on the smallest provocation, simply as a relief from headaches. He quotes numerous instances of persons who have had holes cut in their skulls seven



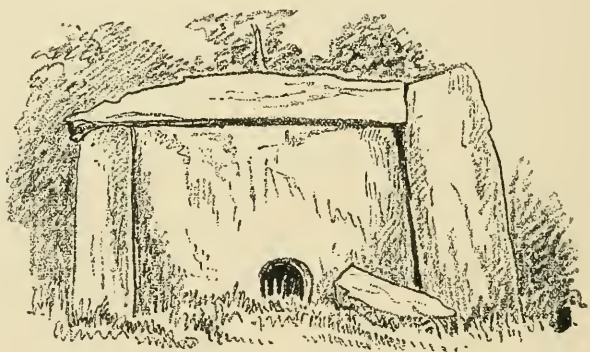
SKULL THAT HAD BEEN TWICE TREPANNED,
FROM A CAVE IN LE PETIT MORIN.

and eight times, without this materially injuring their health; and indeed the Kabyles of Algeria, who are presumably the lineal descendants and modern representatives of the dolmen-builders of Europe, at the present time pursue the same course as a cure for epilepsy.

The name given to the tombs or mausoleums of the polished-stone men is *dolmens*, that signifies holed-stones. Now, it seems to have been customary for these stone sepulchres to have been only partially closed; that is to say, a small slab was planted as a door at the narrowest

end of the mausoleum, and this slab was either removable, or was perforated with a round hole, which hole was provided with a stone plug, in order that the spirit of the dead might take an airing occasionally, and sweeten itself. If, however, the ghost became troublesome, it was shut in again—the cork applied as to the Jin in the *Arabian Nights* tale.¹

The way in which Jewish sepulchres were closed was similar; the body was thrust into a long grave cut in the rock, and then a round disc was rolled in a groove into



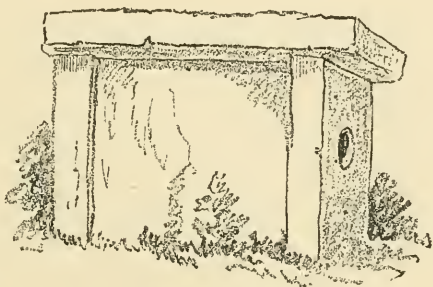
DOLMEN WITH HOLE AND PLUG IN THE CAUCASUS.

the circular opening so as to close it; and it was this disc which was rolled away when the women came to the grave of Christ on Easter morning. The Jews had probably taken the idea from the primeval inhabitants of Canaan, who had erected the megalithic monuments, for they did not borrow it from the Egyptians. Holed-stone doors to dolmens are found in Palestine, as in England,

¹ The Jin is an Arabic adoption, as the Genius is a Latin adoption from the underlying Turanian race. "The root *jen, jun, gun* is the most universal of all Ugric names for divine beings" (Taylor, *Etruscan Researches*, p. 127). In the story of the Fisherman and the Jin we not only have the Turanian name, but a reminiscence of Turanian practice.

the Isle of Man, and France. In the moat of the Musée St. Germain is the dolmen of Conflans, which has been re-erected there as an example, for it possesses not only its holed entrance, but also the plug for stopping it, and shutting in the obstreperous ghost. This, also, is a topic with which I have dealt in the above-mentioned book, wherefore here I do no more than allude to it.

Now, when did the dolmen-builders live and possess the land? That is a question that cannot be answered with certainty. All we know is, that they succeeded the reindeer hunters and preceded the Celtic tide of invaders, the last wave of which was that of the Gauls. The Gauls penetrated up the Danube, perhaps also by the Rhine. They have left their



DOLMEN IN THE CRIMEA WITH HOLE
IN THE SIDE.

traces on their course. They introduced new modes of thought, new customs, a new language, and their own religion. To them the megalithic monuments were unintelligible, though they still occasionally, but only occasionally, interred in the dolmens, which told their own tale as mausoleums. Some of the dolmens were rifled in Roman times, for the contents have been turned over, every object of value removed, and occasionally a dropped copper coin of the empire tells who were the spoliators. In Brittany the Romans utilised some of the alignments for walls, incorporating the upright stones in them.

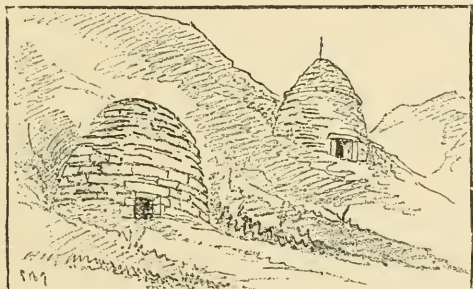
When we come to look for the habitations of the dolmen-builders when alive, we find fewer traces than we do of the habitations of the dead. There is a reason for this. The living dwelt on the best land, and bade their dead occupy the worthless, the sterile mountain top. This sterility of the land where lie the dead has served to keep their monuments intact, whereas the richness of the land about the villages has caused the plough and the pick to effect infinite changes there.

No doubt the people lived in caves where there were suitable caves, but not exclusively. Granitic and gneiss and schistous formations are devoid of caves, and there doubtless the neolithic men built huts that were circular. The thousands of hut circles strewn over Dartmoor, Cornwall, the Welsh hills, and Irish moors belonged to these people. The same huts are found in connection with the same megalithic remains in Palestine. On the Causses it is not possible to identify them, as the custom of building beehive huts subsists to the present day. Every shepherd throws one up for his night's lodging. In every vineyard is one in which the boy may watch when the grapes are ripe.

To the north of Mende, within an easy walk, is the village of Neufchastel, and Vielchastel occupies a platform three-quarters of a mile distant. The rock of this platform is granite, and falls rapidly to a little stream. The present village received its name early in the Middle Ages. There is no record when the "Old Castle" was tenanted. On the platform can be traced the remains of a ring of boundary stones and heaps of stones, with some erect, which mark the site of habitations; but the ruins are so shapeless that it is impossible to make much out of them.

But what is very curious is that adjoining this settle-

ment is a vast system of subterranean labyrinths, very similar in construction to the *fogous* of Cornwall, and to those met with in Scotland and Ireland, usually connected with fortifications of the neolithic period. There are two of these labyrinths at Vielchastel, one of which, the most accessible, is called La Grotte de la Gardette, in which a dog with fiery eyes is said to keep guard over a pot of gold. The construction is as follows: At this point is a *tor*, an outcrop of granite, stratified vertically, at the edge of a steep slope. With infinite pains a whole series of the strata has been split off this tor, and then has been



BEEHIVE WATCH-HUTS IN THE VINEYARDS.

toppled over, and rude blocks have been erected or piled up one on another, so as to sustain these flat stones, and make a passage under them running in every direction, and communicating with chambers or storerooms. To the superficial eye the whole has the appearance of a confused jumble of rocks fallen naturally—"a clatter," as it is called on Dartmoor. It is only by crawling in through a hole in the roof that one discovers one's self to be in a sort of catacomb of ramifying passages.

The second labyrinth is more extensive, but more difficult to trace, owing to the falling in of the roof stones and the accumulation of earth in the passages.

That this series of "fogous" served as a place of refuge is very certain, but also almost undoubtedly the numerous circular or oval chambers were store places for grain.

It is remarkable that in the Icelandic Örvar-Odd Saga, the hero Odd, whilst ravaging Aquitaine, finds that the enemy hide in similar subterranean refuges. "Odd leaped after them, and they fled into a forest, and there in the earth was the entrance to an earth-house, into which they disappeared. Odd pursued them into this earth-house, and they offered resistance, but he did not give over till he had killed them all."¹

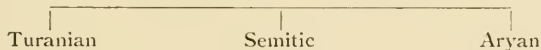
Similar refuges are spoken of in Ireland; the same Odd was harrying there. "Odd so hated the Irish that he resolved to do them all the harm he could. He went up a track through the forest that was somewhat rude, and he pulled up every bush by its roots, till he came to one that seemed loose, and when he had removed that, he found a door under it; and this he burst open, and found a way that went underground. He entered, and saw it was an earth-house, and there were four women concealed in it, and one was exceedingly good-looking. He therefore grasped her by the hand, and tried to pull her outside. Then she cried out, 'Let me go, Odd.' 'Why,' exclaimed he, 'how do you know my name?'" And if the reader desires to know further, let him get an Icelandic dictionary and a grammar, and read the Örvar-Odd Saga for himself.

We come now to the question, What was the great stock from which came the race of the rude stone monument builders? I think we can have little difficulty in answering this.

¹ *Förnaldar Sögur*, ii. p. 229.

If the underlying race was Turanian,¹ so also was this conquering race. It had not the straight, wiry hair that was possessed by the first arrivals; the hair was perhaps lighter, more curled, and was brown or chestnut.² But it is from the monuments chiefly that we consider the people to belong to the Turanian or Altaic stock. "The Aryan and Semitic nations have been great builders; they have left us temples, theatres, basilicas, and palaces; they have made bridges, roads, sewers, but they have never been notable as tomb-builders. Their instinct has led them to concern themselves with the needs and domiciles of the living, rather than with the necessities and the resting-places of the dead. But scattered over the world from Algiers to Kamtschatka, from the Orkneys to Ceylon, we find everywhere the conspicuous and unmistakable monuments of a great tomb-building race. This race seems to form the ethnological substratum of the whole world; it is like the primary rock which underlies the whole series

¹ The ordinary reader for whom this book is intended may perhaps need a little light here. The great linguistic and ethnological races of Europe and Asia are three, and may be simply represented thus :—



The *Turanian* is represented by the Tartar, Turkish, Basque, Esquimaux, Finns, Lapps, etc.

The *Semitic* is represented by the Hebrews, Arabs.

The *Aryan* is represented in India by the Hindus, in Asia by the Old Persians, in Europe by the Greeks, Latins, Slavs, Celts, Germans, and Scandinavians.

² There is doubtless a difficulty about the colour of the neolithic man. We can hardly imagine a fair Turanian. Nevertheless there are to be found both fair hair and blue eyes in Finland, and also among the Kabyles, and among the Basques. But then it must be remembered that there has been a large admixture of Swedish blood with the Finns, and that the Kabyles were conquered and held in subjection by the Vandals, and that quite possibly the fairness of hair and skin found among them may be due to admixture with this northern blood, and the Basques are admittedly a very mixed race.

of subsequent formations. There can be no hesitation as to the existing stock to which these non-Aryan tomb-builders belonged. The great Turanian race, which was the first to spread beyond the cradle of mankind, and of which the Chinese, the Mongols, the Tartars, and the Finns are existing representatives, is pre-eminently the race of the tomb-builders.

“The vast and numerous monuments which constitute the tombs of this race can always be recognised; they exhibit a most remarkable and most significant unity of design and purpose. These tombs are all developments of one hereditary type; they are all the expression of one great hereditary belief, and they all serve the purposes of one great hereditary cultus. The type on which they are modelled is the house. The belief which they express is the fundamental truth which has been the great contribution of the Turanian race to the religious thought of the world—the belief in the deathlessness of souls. The cultus which they serve is the worship of the spirits of ancestors, which is the Turanian religion. The creed of the Turanians was Animism. They believe that everything animate or inanimate had its soul or spirit; that the spirits of the dead could still make use of the spirits of the weapons, ornaments, and utensils which they had used in life, and could be served by the spirits of their slaves, their horses, and their dogs, and needed for their support the spirits of those articles of food on which they had been used to feed. Hence, when we open these ancient Turanian sepulchres, we find that the resting-places for the dead have been constructed on the exact models of the abodes of the living; the dead have been carefully provided with the necessaries of life—the warrior is buried with his spears and his arrows, the woman with

her utensils and her ornaments ; by the side of the infant's skeleton we find the skeleton of the faithful house dog—slaughtered in order that the soul of the brave and wise companion might safely guide the soul of the helpless little one on the long journey to the unknown land. In all respects the tomb is the counterpart of the house, with the sole difference that it is erected in a manner more durable and more costly. The Turanian tombs are family tombs ; the dead of a whole generation are deposited in the same chamber.”¹

This remarkable race has by no means remained everywhere on one cultural stage, and that comparatively low, that of the nomad on the Siberian and Central Asian Steppes. It is almost certain that to it belong the earliest developments of civilisation—the Egyptian, the Accad and Soumerian, the Chinese, the Lydian, and the Etruscan. It has the great merit of having contributed to mankind the art of expressing ideas in writing ; the cuneiform characters, the hieroglyphs of Egypt, and the sign-writing of China, are the productions of its genius.

This great people had certain peculiarities of custom, which created surprise, amusement, and disgust among the Semites and Aryans with whom they were brought in contact,—customs found everywhere, where they went, though in many cases subsisting merely as traces.

One of these was the community of wives. Every woman belonged to all the men of the tribe. This was the usage among the Picts ; it shocked the Celts who surrounded them. Where this has ceased to be practised, there still remains, as in Japan, as was anciently also among the Etruscans, a custom before marriage which is a reminiscence of it. And among the Babylonians something

¹ Taylor (Isaac), *Etruscan Researches*, 1874, pp. 34–36.

of the sort remained as a religious rite, forming a portion of the worship of Ashteroth. The consequence of this condition of affairs was that all inheritance of property and all descent was through the female side. This was the case among the Picts, and the names of their kings show that they claimed the right of succession through their mothers. It was the same with the Etruscans; in their tombs, the pedigrees are all traced through the maternal side.

But, as may well be understood, all men would not be content with this state of affairs, and the boldest and bravest resolved to have wives of their own. Now, the only way in which this could be effected was by capturing women from other tribes. By wife-capture alone could the woman become private property, and, inasmuch as she did not belong to the tribe, she was not obliged to fall in with the condition of affairs sanctioned by custom. This is the origin of bride-capture, which has subsisted as an usage in Asia to the present day, and which is preserved as a fiction in the customs of the peasantry over a large part of Europe.

Wherever we find bride-capture, or a reminiscence of it, in folk usage, there we may be certain polyandry existed in an earlier stage, and where community of wives existed, there was a race in migration, consequently killing its female babes, as an encumbrance.

There is another custom, widely extended, and so absurd and irrational that it serves very well as a note of the spread of the race which originated it. This is the *Couvade*. In some branches of the race, as the Lapps and Finns, it is no longer found; in others it is languishing to death; in others, however, it is still in force.

The *couvade*—"hatching"—consists in the father, on the

birth of a babe, being put to bed, fed on pap, and nursed tenderly in place of the mother.

"In Biscay," says Michel, "in valleys whose population recalls in its usages the infancy of society, the women rise immediately after child-birth, and attend to the duties of the household, while the husband goes to bed, taking the baby with him, and thus receives the neighbours' compliments." Marco Polo met with the *couvade* in Eastern Asia in the thirteenth century; in *Hudibras* the widow is made to say—

. . . Chineses go to bed,
And lie-in in their ladies' stead.

But this practice does not seem to have been in usage among the Chinese in historic times; Strabo says it was the custom of the Iberians of the north of Spain. It has been found in Navarre; and is mentioned in the old French *fabliau* of Aucassin and Nicolette, where the king of Torelore is "au lit et en couche," whereupon Aucassin takes a stick to him, and forces him to abolish the custom in his realm. It was customary in ancient Ireland.¹

Now, what is the significance of this extraordinary usage? It sprang up as a revolt against the law of succession through women, just as bride-capture rose out of revolt against community of wives. As a man desired to have one woman as his very own, so did a man desire to recognise the children born to him by this woman as his own offspring. This he could only do by a fictitious lying-in, and a pretence that eating solid food and taking violent exercise would injure the babe whose identity with himself was thus assumed.

The "hatching" is not a necessary accompaniment of

¹ See for very full account of the *Couvade*, Taylor's *Early Hist. of Mankind*, 1865, vol. i. chap. x.

the Turanian race, but it very generally is found where that race has been and lingers on, overlaid by other races, and it always presupposes descent "by the spindle," and that presupposes polyandry.

We come next to the religion of this Turanian race. This reposes, as already said, on Animism; and as a cult, consisted in the worship of ancestors. But the worship of spirits is but deprecation of their wrath advanced to a higher level of ideas. Primarily the entire religion of this people consisted in pacifying the spirits of their dead, and preventing them from returning to do them injury.¹ This thought has left an ineradicable mark on all funeral usages wherever this race has been. Taking the dread of ghosts as a fundamental notion among the builders of the rude stone monuments, we obtain an explanation of a custom universal in civilised Europe, and perhaps the least suspected of any. This is the custom of wearing mourning on a death in the family.

The usage is one that commends itself as an outward and visible sign of bereavement, and yet the correlation of funeral customs leads to the inexorable conclusion that in its inception the practice had quite a different significance from that now attributed to it.

Black was not the universal hue of mourning. In Castile, white obtained on the death of its princes. In Egypt, yellow was the symbol of mourning. Elsewhere purple is used. These colours merely represent in cloth the pipeclay, lamp-black, yellow ochre, and woad wherewith primeval mourners disguised themselves. But why did they thus discolour themselves? not as tokens of

¹ For an admirable account of the way in which the cult of the dead forms the religion of the Chinese and natives of Annam, see Bouinais et Paulus, *Le Culte des Morts*, Paris, 1893.

woe, but in order to make themselves irrecognisable by the spirits of the dead just interred, whose pursuit they feared.

In the savage there is no tender clinging to the remembrance of the loved one who is deceased. The dead is at once transformed into a bugbear, who must be evaded and avoided, or cajoled by every available means.

The dead is carried to his grave by roundabout roads, the way is swept or sprinkled with water to obliterate the traces by which the funeral convoy has gone. The door of the hut by which the dead passed is blocked up. To the present day in parts of Scotland the dead man's chair is turned upside down, lest he should return and claim it.

The Czechs, on returning home after a funeral, turn about at every few paces and throw stones, mud, even hot coals in the direction of the grave, to deter the spirit from following them.

In Hamlet, at the funeral of Ophelia, the priest says—

For charitable prayers,
Shards, flints and pebbles should be thrown on her,

because it was customary in England thus to pelt a ghost suspected of intention to wander.

The Californian Indians were wont to break the spine of a corpse so as to paralyse the lower limbs, and make "walking" impossible. Spirit and body to the unreasoning mind are intimately associated together.

In ancient Mexico professional ghost-ejectors were employed who were invited after a funeral to visit and explore the house whence the dead had been removed, and if they found the ghost lurking about, to kick it out. In North Germany a troublesome ghost is bagged, and the bag emptied in some lone spot.

The daubing with paint and disguising of the person after a funeral, to the savage is simply a means of deceiving the returning ghost. The Coreans, when in mourning, assume extinguisher hats that completely conceal their features, for precisely the same reason. In New Guinea, for the same object, mourners envelop themselves in wicker-work frames in which they can hardly walk about.

A wood block of the end of the seventeenth century or the beginning of the eighteenth, found on certain broadside ballads issued in London, represents a funeral with mourners all disguised completely. First rides a man on horseback with a funeral cloak tied in a knot above his head, and enveloping him so as to conceal his features. The mourners and bearers are all similarly invested in black extinguishers, so that their faces may not be seen. The black sacks worn by the fraternity of the Misericordia, with eye-holes only, is a reminiscence of the same disfigurement and disguise, for the deception of the ghost. Such also is the widow's veil.



Fig. 1.



Fig. 2.

NEOLITHIC GODDESS
OF DEATH.

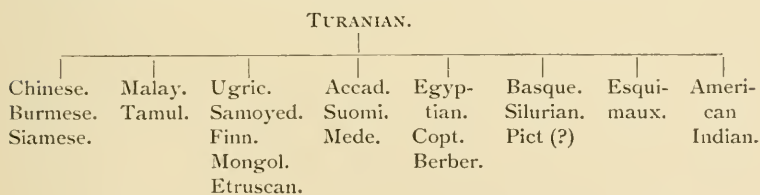
Fig. 1. From a tomb in
Gard. Fig. 2. From
a tomb in Marne.

That the dolmen-builders did advance to something further than mere deprecation of the wrath of spirits of the dead is probable. That they had a female goddess of the dead we may be sure, because of the discoveries of the Baron de Baye in Marne. Here, in the soft upper chalk, he has unearthed a number of sepulchral caverns, artificially cut; and several of these have their entrances guarded by a female figure adorned with necklaces. Nay, more, the stone celt or axehead is also represented in these tombs,

evidently with some religious significance attached to it. Celts are also represented on the granite blocks of some of the covered sepulchral avenues of the Morbihan, together with rude scutcheon-shaped figures that I believe to be attempts to represent the same female deity who is exhibited with a little better success in the soft chalk of Marne, and who also appears on a dolmen in Gard. But what idea does the stone axe represent? It may possibly have some such a meaning as the *crux ansata*, the key of the Nile, on the Egyptian tombs, and may be a symbol of life after death. It is more probable that the stone axe was a symbol of violent death, perhaps of a deity of destruction. In the Etruscan tombs we have *Culmu*,¹ the goddess of death, and a black deity, figured with a hammer, called *Charu*, the Charon of the Greeks.

The female figure has also been traced in Brittany.

We come lastly to the language of the dolmen-builders. We may now go a little further into the pedigree of the Turanian tongue.²



The primitive population of the Mesopotamian basin was Turanian, in its branches of Accad and Suomi and Mede. It was peacefully overwhelmed by a Semitic population, the Chaldæan, which appropriated

¹ Culma is the Finn Kalma: the root *kul*, meaning death, may be traced through the whole region of Ugric speech. The same deity survives as Kali, the Goddess of Death, adopted into the Hindu pantheon from the conquered Dravidian race.

² Very incomplete, calculated to give a general notion only.

the mode of cuneiform writing invented by the Turanian aborigines.

In Etruria, the Latin, an Aryan race, rose and overcame its conquering Turanian masters; but underlying the Aryan Latins and cognate races was a previous Finnic bed.

In Gaul the successive waves of Celtic immigration drove the Iberian population south and west, and, except in the Basque provinces of the Pyrenees, killed the language. We might have hoped to have found the Basques to be perfectly pure representatives of the Turanian dolmen-builders. But this is not the case. The Basque race is not a pure one. Their heads are both brachycephalic and dolichocephalic in almost equal proportions. Though fair hair is exceptional among them, chestnut hair prevails, and there is a considerable admixture of hair that is black. In stature there are some very tall, others very short. Among forty-six pairs of Basque eyes, twenty-five are brown and twenty-one are blue. "I have reason to believe," said Dr. Broca, "or rather to suppose, that two races,—one short-headed, the other long-headed,—differing more considerably by their cephalic index than by other characteristics, formed a mixture of the population."¹

Bopp and Max Müller have proved, by unassailable evidence, that the language of the old Aryans had become elevated to the formation of inflections before they migrated from their primeval seat. The Basque language has never attained to this condition, it has not advanced beyond the agglutinative stage. Consequently, it is quite impossible to admit it as constituting

¹ Broca, "Crânes Basques," in *Bullet. de la Soc. d'Anthrop.* for 1868, p. 51.

one of the diverse classes of the Aryan family. The Basques have indeed taken up a number of words belonging to a civilisation more advanced than their own, when they came in contact with Celts and Romans. But that does not give the tongue any claim to be considered as a branch of the stock to which Celt and Latin belong. All ancient writers represent the Basques as hemmed in by Celtic tribes that had driven them before them to the slopes of the Pyrenees. Consequently, we may justly regard the Basque or Iberian as the representative in Europe of the population which occupied Gaul and Spain before the dawn of history. But, as already shown, from the testimony of the dolmens, and from the examination of the heads and colour of living Basques, that race was a mixed one.

That the Basque language is radically a Turanian one, no longer admits of doubt. This has been conclusively established by Prince Lucien Bonaparte.¹

There are place-names in Great Britain, such as Mendip (Basque *mendia*, a hill), and Oure, Ure, and Ore (Basque *ur*, water), which indicates that the tongue was at home in our islands at one time; there are Welsh words irreducible to Aryan roots, apparently taken up into the language from the earlier Turanian population with which it was brought in contact.

In addition to the Iberian race in Aquitaine we have the Ligurian, that occupied the coast from Genoa to the Pyrenees, and stretched as far north as the Alps

¹ The best treatise on the Basque race is that of M. Bladé, *Etudes sur l'Origine des Basques*, 1869; and the worst is that of M. Michel, *Le Pays Basque*, 1857. Michel accepts as genuine the forged heroic lays of the Euskarii.

and the Auvergne Mountains. Its exact position in order of entry into Gaul is doubtful.

A summary of the ethnology of Central and Western Europe is this, as far as known at present:—

In the centre, about the Alps, from a vastly remote period lived the original stock of the Aryans, not a nomad people, but agricultural, and socially and politically organised. They have left their remains, layer upon layer, at the bottom of the lakes of Switzerland, Bavaria, Austria, and Hungary, around their pile dwellings, where their development in the arts may be read, as is the deposits of the reindeer hunters in the *abris* of Périgord.

They have given us other evidence of their cultural condition before they separated into several peoples, and expanded to conquer the world. This evidence we have in their language.

Around them lived another race, occupying the seaboard, and holding a large portion of Western France, and all Spain and Portugal. This same people also occupied the British Isles, till driven west by the Gaels and Britons.

Whether that non-Aryan race was one may be doubted. In the main it was of the Turanian stock, but what other people was associated with it we know not.

The Gaul gradually overwhelmed the non-Aryan race or races, but neither exterminated them, nor absorbed them. On the contrary, the underlying race has drunk in the Gaulish blood without that affecting its colour. What it has sacrificed has been its Ugric tongue; it adopted first the Gallic speech, and then one that is Romance.

CHAPTER XI

THE MEN OF IRON

The Theory of the Bronze Age preceding that of Iron only true to a certain Degree—The General Prevalence of Iron Ore—The Early Date at which it was discovered—Bronze an Amalgam—Preceded by a Copper Age—The Production of Tin—The Succession of Races—The Ligurian—Two Iron Cultures—Prehistoric Furnaces in the Jura—Gaulish Tumuli—The Character of the Gaul—Difficulty of Combination—The Gaulish Dress—The Gaulish tongue—Druidism a Survival of Turanian Schamanism—Dread inspired by a Conquered Race—The Gaulish Druids—Their Means of Divination—Human Sacrifices—Persistence of Folk Usages—Singular Usages at Brive and in Quercy—Prehistoric Pottery—Its Beginnings—Neolithic Vessels—Gaulish Pottery.

THE theory propounded by the Danish antiquaries, that the epochs of man might be divided into those of stone, bronze, and iron, and that iron succeeded bronze, as bronze ensued upon stone, was one applicable to the finds in the peat-mosses of Denmark and the tombs of Scandinavia, but is not one of universal application.

It has seemed to some incredible that an amalgam such as bronze can have been discovered before a pure metal, iron. This is what Thomas Wright had the hardihood to say at the time when the law of succession had been imposed with all the weight of the authority of the northern antiquaries. "Bronze," said he, "is a mixed metal, and it is absurd to suppose that its use

could have preceded that of iron in countries where the latter metal was abundant."

Iron is the most common of metals; it is one that arrests attention by its colour and by its weight. Already, in the palæolithic age, it had been employed in the form of rust as a pigment, and as pyrites as a means for obtaining fire. There are African tribes very low in the scale of culture which work in iron; and certain Tartar tribes manufacture their pigs of iron, as they do their bread, in every household.

The Matabele have passed from an age of stone and bone to one of iron, without an intervening stage of bronze, and the same is true of other races.

In France and in England kidney iron is found in the greensand, hard by the chalk, and in the midst of forest land, and all that was requisite to produce a flux was therefore at hand. The Weald of Sussex and the sandy heaths of Surrey are seamed with trenches cut in quest of iron by the early inhabitants of Britain, followed by the Romans. It was as much sought in Gaul, and vast accumulations of slag and traces of kilns are to be found in Périgord and elsewhere in Guyenne, wherever the iron ore is found.

It is probable that ironstone was first employed on account of its weight for slingstones. The forms in which it is found—as pyrites-balls in chalk, or in kidney-like masses in the sand—adapt it for this purpose.

With rude bellows of skins, or with a fan, a sufficient draught could be produced which would smelt the ironstone in a charcoal furnace, if to it a few lumps of chalk were added. After that, the hammering out of tools came as a matter of course.

We have evidence of copper in use in Egypt at a very

early period. The copper age there was some 4000 years before Christ; it was succeeded by that of bronze, but through both was a spare use of iron. On the earlier monuments, all metal weapons are coloured red. In the Pentateuch, iron is named thirteen times and bronze forty-four times. According to the Book of Joshua, iron vessels were dedicated to the Most High (vi. 19-24), and Moses assured the Israelites that the land into which he was about to lead them was one where stones were iron (Deut. viii. 9). The weapons of the Greeks, according to Homer, were for the most part of bronze, nevertheless he speaks in many places of iron, and its employment for tools and weapons. Noric iron was famous in antiquity, and Noricum was occupied by a Gallic race even in Latin times.

The manufacture of bronze is by no means simple. It is an amalgam of copper and tin; and the latter metal is rare. It is found in a few centres only, far apart. The production of an amalgam presupposes the use of the pure metal, in this case of copper, and of experiments made to counteract the obvious defect of copper, its softness.

That a copper age preceded the bronze age can no longer be doubted. There are races in Central Africa at this stage at present. Copper prehistoric axes and spear-heads have been found at Hissarlik (Troy), in Cyprus, Portugal, Ireland, England, and Hungary. That more have not been discovered is due to the fact that so soon as it was ascertained that an admixture of tin converted them into far more serviceable tools, those of copper were generally thrown into the smelting furnace.

It is significant that the forms in which copper weapons were cast resemble closely those of the polished stone weapons, and never resemble the finer shapes assumed by

the articles in bronze. Moreover they have all a granular coarse surface, and have never been worked over after casting. Thirdly, they have never any ornamentation on them, showing a lack of graving tools of a harder material than copper. Lastly, they are found along with objects of the neolithic age, rarely with those of the bronze age. Thus we are forced to the conclusion that a copper age ensued on that of polished stone, and heralded the introduction of bronze.

Bronze not only implies the smelting of copper, but also the production of tin. But tin is found nearly everywhere associated with sulphuret of arsenic, or sulphuret of bismuth. When this ore is melted, the tin runs out as brittle as glass, and is useless until it has been calcined. On Dartmoor alone is tin found free from these admixtures. Consequently, tin has to undergo two processes, the second of which is a delicate one. By calcining the ore the sulphur is expelled, and the arsenic and bismuth are left in a condition of oxide, when they can be removed by washing. Tin resists oxidation, and consequently remains.

But this is not all. Tin extraction, as seen, is an elaborate process. The next stage is that of fortifying the soft copper with it. Copper is comparatively common. Tin is very rare. In Europe it is found in the Appenines, in Spain, in Saxony, and in Devon and Cornwall. In the Appenines tin and copper are found together, and the basin of the Po was the great centre of the bronze industry. That all the bronze used in Europe came from the Etruscan emporium is improbable. It came as well from the East, and much travelled up the Danube; but the bronze found in Gaul, and in Britain and Scandinavia, is for the most part of Etruscan manufacture, or is copied

from Etruscan models. The proportions of copper to tin in good bronze is 91 per cent. of copper to 9 per cent. of tin.

There would seem to be a *primâ facie* case made out for iron as preceding bronze. And if early prehistoric iron weapons and tools have disappeared, it may be argued that iron is a metal eminently liable to rust, and the non-discovery of these articles may be due to their having rusted away.

Nevertheless, we cannot possibly admit that an iron age preceded that of bronze in Gaul or in Britain. In Britain, Canon Greenwell has shown by his exploration of barrows that the neolithic men were conquered and driven west by a new race of more savage character, armed with bronze weapons; consequently, the displacement of one stage of civilisation by another was effected by violent means.

In France it was otherwise. The bronze entered during the neolithic age from the basin of the Po, from the Etruscan factories, by means of trade. For a long time the bronze spear-heads, swords, and axes were articles of luxury, confined to the chiefs, and after the introduction of steel bronze continued to be employed for defensive armour, and for ornament.

Although in Gaul, Britain, and Denmark the succession is polished stone, then bronze, it was not the case that the same race grew in knowledge and discovered bronze. The bronze was an import; and it is by no means improbable that the copper weapons that have occasionally been found are native attempts to imitate the foreign article with a mineral easily attainable, before they had discovered the secret of mixing tin with copper to make bronze.

There never was a bronze age in America, and if the

neolithic men reached a bronze culture, it was due entirely to imitation of the amalgam imported from Etruria.

That they never discovered iron is evident from the absence of iron following polished stone, in such beds as those of the *abris* on the Vézère, and in the caves of the Causses, where, owing to the conditions of formation of the several layers of deposit, it is certain that traces of iron tools would have been discovered, if such tools had been used.

As already stated at the close of last chapter, there is evidence of another race having occupied ancient Aquitaine. This is termed the Auvergnat or Ligurian. These people were small, dusky, with heads narrow across the cheek-bones, and with dark straight hair and dark eyes. This people form the bulk of the present population, and is believed to have spoken a Finnish language; according to one opinion, it is they and not the Iberians who have their speech represented by the modern Basque.

It was not a savage and belligerent race, and we can hardly believe that it conquered the energetic dolmen-builders.

Broca calls this the Celt, and is followed by Canon Isaac Taylor. M. Bertrand, who above all men in France is most intimate with prehistoric antiquities, attributes to it remains from the barrows that are not Gaulish, nor are neolithic of the dolmen period. This race is wholly unrepresented north of the Loire and in Great Britain. Where all is so uncertain, I am greatly tempted to consider it as an offshoot of the reindeer hunters, holding their own on the coast and in the mountains, modified in physical form by climatic alterations. They have left a deep and lasting impress on the South, where the Gascon is proverbial for his bombast and his timidity.

We will now return to the consideration of the advent of iron in Gaul.

There were in Europe, north of the Alps, two distinctive and independent iron civilisations, called respectively that of Hallstatt and that of La Tène, after the most important finds of these remains. The Hallstatt is the earliest. It derived its inspiration from northern Italy, both as to shapes and as to ornamentation. The La Tène iron manufacture was independent. It extended throughout Gaul and Great Britain and Ireland, and is found along the Danube and Rhine valleys. It is associated with Celtic copies of Macedonian coins, and with the ornamentation of spirals and interlacings of lines so characteristic of Celtic art, which reached its perfection in the illuminations of Irish MSS. and Scottish brooches and crosses, and which was copied by the Scandinavians. Both the Hallstatt and the La Tène iron work exhibit a servile imitation of bronze—an inability in the manufacturers, in dealing with iron, to break away from traditional forms and methods which belonged to the amalgam that had so long been in use. Whether in swords, in torques, or buckets, it is the same, the iron articles are copies of those which had preceded them in bronze. It is therefore certain that in Europe, whatever may have been the case elsewhere, the iron age succeeded one of bronze, just as that of bronze came in after the age of polished stone.

Among the palæolithic people we see a peaceful development in civilisation, from the rude Mousterian epoch to that of La Madeleine. But the epochs that ensue show no such growth in intelligence of one race. The neolithic people acquired bronze by exchange, just as the Pacific Islanders acquire Manchester cotton goods. And

finally they were routed and driven into the mountains or into the sea, or crushed into servitude by an alien race altogether, not superior to it in mental or physical powers, but happening to be armed with weapons of a metal superior to bronze and flint. The Gaul conquered the Iberian, or Iberian and Ligurian combined, with his steel sword and iron armour, just as the Prussian beat the Austrian by virtue of possessing the needle gun.

We know precisely the course taken by the invading Gauls. It can be traced by finds of hordes of iron instruments. The Gauls entered what we call France by the Danube; on reaching the tableland of the Black Forest, where is its source, they turned into the basin of the Rhine, and some migrated north, whereas others crossed the Jura and descended on the fertile plains of France.

A whole series of prehistoric iron furnaces has been discovered in the Jura, where, according to tradition, dwarfs once wrought at metal. They consist of a clay floor on which a circular wall of boulders has been erected, and lined with clay. In Périgord also there are remains of old furnaces, but not so perfect, nor is their date so certain.

The Causses are strewn with cairns of the iron age. Near Cabrerets, on the Célé, is a moor that is literally covered with them, and is the scene, according to popular tradition, of a great battle. There is no mistaking a tumulus of the iron age from one of the polished stone period. It has not the external ring of stones,¹ nor the internal dolmen. At St. Cernin de l'Arche the two sorts of tumuli subsist side by side on the same bald plateau.

¹ The ring is not always visible; as the cairn spreads, it buries the stones originally set to mark its circumference.

These tumuli, on being explored, reveal iron weapons of offence, and bronze ornaments, and defensive armour.

As a matter of fact, there seem to have been in Gaul successive waves of Celtic immigration, of which that of the Gauls was the last.

But with these we need not concern ourselves. It suffices us to have a general idea of the nature and habits of the men whose swords, and battleaxes, and helmets, and chariot wheels we see in museums; men who have contributed towards the formation of the character of the modern inhabitants of France, and, what concerns us specially, of Aquitaine. I cannot give a better description of the Gaul than that of Michelet, in his brilliant summary of the many notices in the classic writers :—

“The genius of these Celts in Gaul was nothing more nor less than insatiable restlessness, eagerness for attack and conquest. They were men of war, and noisy ones. They ran about the world sword in hand, less, apparently, out of greed of conquest than out of a craving to see, know, and to be on the move. They broke and destroyed everything where they went, and were incapable of producing anything. They were the children of a new epoch, big-bodied, fair-haired, white-complexioned, full of vehemence, but short of breath and persistence, full of a ferocious joviality and vast expectations. Vain they were, having as yet not encountered their masters. They were eager to see that famous Alexander who had conquered Asia, and before whose countenance, so it was said, kings had fainted. ‘What is there that you fear?’ asked this terrible man. ‘Nothing,’ was their sole reply; ‘save lest the heavens should fall!’ But they were not afraid of the heavens, for when it thundered, they discharged their arrows at it. When the ocean met their eyes, rolling in

its massive waves, they accepted it as a challenge, and rushed to the attack, brandishing their weapons. It was a point of honour with them never to retreat. Under a blazing roof they obstinately remained till it fell on their heads. No other nation held life so cheap as did they.

“For a bowl of wine and a handful of money they would engage to die. They mounted a platform, distributed the money and the wine among their friends, then cast themselves on their bucklers, and held out their throats to the sword.

“Their banquets rarely concluded without a free fight. The haunch of roast meat belonged to the bravest, and each man present insisted on his being so considered, and laid his hand on the choice morsel.

“Their highest pleasure, next to fighting, consisted in surrounding the stranger, in making him sit down among them, and tell them tales of foreign lands. These barbarians were insatiably inquisitive. It was a case of the pressgang with them hunting strangers. They carried them off from markets and roads, merely to force them to talk. They were themselves indefatigable, terrible talkers; their speech abounded in figures; they were solemn and grave to burlesqueness, in their guttural pronunciation. It was a hard matter in their assemblies to enforce order, so that the speaker might be heard in the midst of incessant interruptions. It was necessary to employ a man, sword in hand, to enforce silence. At the third summons one who interrupted had his suspenders slit, which tumbled the garments they suspended about his feet.”

All Celts, according to a remarkable consensus of authorities, were tall, pale, and light-haired; but the Gauls were more thick-set and had fairer hair than the men of the other branches of the same great stock. The

women were especially tall and handsome. If we may trust Ammianus Marcellinus, who had a personal knowledge of the people, the women were more formidable opponents than the men. On a quarrel arising between her husband and a stranger, the Gaulish wife flew to the assistance of her goodman, with streaming hair, vociferating loudly from her ample lungs, and striking out with her huge snowy arms, or kicking "with the force of a catapult."

Men and women wore a very similar dress, a blouse with sleeves, confined in some cases by a belt, and with loose trousers contracted at the ankle. In fact, the universal blue blouse, as well as the felt hat worn by the French peasant of the present day, are reminiscences of the ancient Gallic costume. The Gauls were particularly fond of gold ornaments and of plaid cloaks of brilliant colours. A chief must have presented a surprising sight to a Roman, accustomed to the white toga. His garments were of a flaming and fantastic colour; his hair hung down like the mane of a horse, or was heaped in a great bush on his forehead. His hair and moustachios were dyed red with the "Gallic soap," a mixture of goat's fat and alder juice.

The fatal characteristic defect of the Gaulish character was incapacity for united action. The Gaulish clans were incapable of combining for long. They fell apart through mutual jealousies. It was this which made them a prey to Cæsar. He could always count on defeating the tribes separately. When any great combination was brought about against the common foe, it always gave way at the first disaster.

In language the Gaulish dialect of the great Celtic tongue approached the Latin far more closely than any other; and this is the reason why the French is a Romance

language. It accommodated itself to the Latin with singular facility. It was the same with the Gallic mythology; the gods of the Gauls so nearly resembled those of the Roman Pantheon, as to be discriminated only by their names. Apart from and independent of the Gallic mythology and national religion, was the great organism of the Druids. Druidism was a survival of the Schamanism of the neolithic Turanian race that had been overrun by the Celts.

In an important chapter of his *Ethnology in Folk-lore*, Mr. Gomme points out the power a conquered race has over the conquerors. "The influence of a conquered race does not die out so soon as the conquerors are established. Their religious customs and ritual are still observed under the new régime, and in some cases, as in India, very little, if any, attempt is made to disguise their indigenous origin. Another influence exerted by the conquered over the conquerors is more subtle. It is not the adoption or extension of existing customs and beliefs; it is the creation of an entirely new influence, based on the fear which the conquered have succeeded in creating in the minds of the conquerors."

In a certain condition of mind, not by any means overpassed among the lower orders in France or England, all great disasters, strange sicknesses, are attributed to witchcraft, to the evil eye, to some malignant enemy who deals in supernatural powers. It would be the same among the Celtic conquerors of Gaul. When murrain broke out among their cattle, or disease ravaged their villages, they would certainly attribute it to the ill-wishes of their Turanian serfs. If they found their own gods powerless to arrest the evil, they would propitiate the sorcerers of the subjugated race.

By this means the Schamans of the neolithic people acquired veneration among the Gauls. But there was another reason for this. The ritual of these Turanian spirit-deprecators was a bloody one; it was as horrible as it was mysterious, and the terror and mystery attending it awoke pre-eminent respect among the Celts.¹ By degrees Druidism, that is to say, Turanian Schamanism, encroached to such an extent as to become dominant, not in Britain, but in Gaul; and by adopting some scraps of philosophy relative to the transmigration of souls, it postured as a system of religious thought. The Gallic Druids gained a political supremacy; their judgments were taken as the voice of the gods, and they were themselves exempt from all earthly service. They strutted in scarlet and gold brocade, and wore golden collars and bracelets. They took oracles from the sound of the wind in oak trees, or the flight of birds, and scratched their judgment on the blade-bone of an ox or a sheep; or, more fearfully, gathered omens from the manner of falling, and convulsive movements, and flow of blood from a human victim.

The Romans were familiar with the idea of human sacrifice, but they were startled at the recklessness where-with lives were devoted by the Druids in Gaul. The slaughter of victims was almost as continuous and whole-sale as among the Asteks of Mexico, when the Spaniards arrived in the New World. If any person of importance was in peril from disease or the chance of war, a criminal or a slave was killed or promised as a substitute.

"The Druids held that by no other means could a man's life be redeemed, or the wrath of the gods appeased; and they went so far as to teach that the crops would be fertile

¹In the same way the Etruscan haruspex became almost a more important personage in Roman religion than the pontifex.

in proportion to the richness of the harvest of death. It became a national institution to offer a ghastly hecatomb at particular seasons of the year. In some places the victims were crucified or shot to death by arrows; elsewhere they would be strapped into huge figures of wicker-work, or a heap of hay would be laid out in the human shape, where men, cattle, and wild beasts were burned in a general holocaust."¹

The study of European folk-lore points to usages of great barbarity in the past that are not of Aryan origin, but which persisted after the Celtic conquest, and were arrested, lost their significance, but continued in practice through the Middle Ages, and die hard in the present. Unhappily, customs have not been traced to their roots as have words, and till this has been done it is too early to identify a certain custom with a particular race.

The following diagram may explain the persistence of folk-customs.



DIAGRAM OF SUCCESSIVE CIVILISATIONS.

Let *a* represent the neolithic race. It had its usages, and some of these, as *x* and *z*, persisted after the Gaulish conquest (*b*), and appeared as features of Gallic civilisation. Then came Christianity (*c*), which was a greater solvent than any racial conquest, and that enveloped all earlier beliefs and buried most, but not all, customs; it allowed, or was unable to prevent, the persistence of certain earlier usages, neolithic at *x*, and Celtic at *y*, which to a superficial view may be regarded as Christian or Catholic superstitions.

¹ Elton, *Origins of English History*, 1890, p. 261.

For instance, it was the custom annually to offer in the monastery of St. Martin, at Brive, cakes in phallic form.¹ This custom lasted till 1452, and to this day the loaves are baked in these forms in the town. In this case we have a persistence of a probably Celtic usage. In Quercy, it is usual when a new house is constructed to wring the neck of a cock and cast it in at the door. This is a relic of the old sacrifice offered either at the foundation-stone laying, or the completion of a house, and which was originally human, but in Christian times was altered to the sacrifice of an animal. This custom is found everywhere connected with the Turanian race. We break a bottle of red wine over the bows of a vessel when christened, and insert a bottle with coins under a foundation-stone. Anciently, every vessel was launched with the spilling of blood, and a child was buried under every foundation-stone.

The visitor to museums should know something about early pottery; or, if he does any digging himself, in tumuli or in caves, should have sufficient acquaintance with first principles to be able to discriminate between the vessels he sees.

The discovery of pottery probably took place in this wise. Originally vessels were woven of rushes, and were lined internally with a film of clay, so as to make them serviceable for the conveyance or preservation of liquids. Possibly a second film of clay was spread outside. By some chance one of these rush vessels set near a fire was burnt, and revealed the fact that baked clay formed a stronger and more serviceable vessel than one of rushes coated with unbaked clay. The exploration of a great site of pottery manufacture by the Redskins, near St. Louis, brought to light the fact that all their vessels were so

Hoc in templo panes, alii virilis, alii muliebris offerebantur."

manufactured. It is almost certain that pots were so made originally in Europe, on account of the indications found on the earliest pottery of the neolithic age. But if so, that cannot have lasted long. It was but an easy step from coating basket-work and burning it, to moulding vessels out of the clay with the fingers, and then subjecting them to the fire.

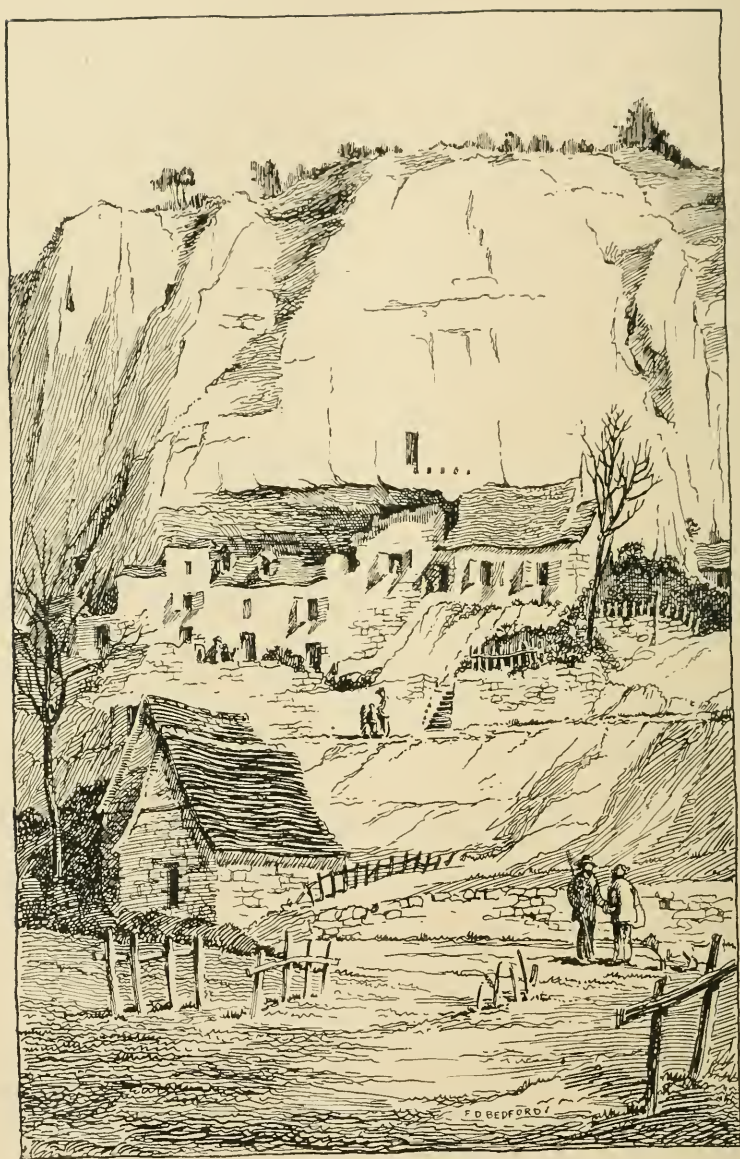
The neolithic pottery is very rude. It is not made on the wheel, and the ornamentation is done by the fingernail, or by the pressure of a cord, or by scratchings with a pointed stick.

All earthenware vessels are distinguishable into two great groups; their fragments are either porous or they are not porous. The potsherds of the first class are smooth, glossy, and do not adhere to the tongue. Those of the second are rough and adhesive when put to the tongue. The first cannot be scratched by steel, the second are easily scratched or scraped. The early men knew nothing of the first kind—porcelain. They found that the common pottery they manufactured was indeed very useful, but its use was much diminished by its great porosity. What we do now is to glaze it. This was beyond their powers. The neolithic men never solved this difficulty. The Gauls endeavoured to get over it by this means. They baked their pots, in which mica and granitic sand was mixed with the clay, and then lined them throughout with a very fine paste of clay brought to great purity and mixed with pitch. Sometimes they coated their pots externally with the same. Then they reburnt them. The result is, that in a shard of this pottery we have a fracture revealing a red interior of very coarse pottery with a fine black film coating it. Such are very common in the tumuli of the iron age. But some-

times they made vessels of the pitch and fine clay alone. In a tumulus I opened in the Landes, I found vessels of both descriptions. Under the rock of St. Christophe, opposite Le Moustier, or in the cave of Malpial, near Gramat, the curious may fill a sack with broken pottery of the finer black quality. There is an internal glaze produced by a coating of pitch having been given it before it was finally subjected to the fire.

In the iron age a great advance was made in another direction. Hitherto the hand had been turned about to give shape to the pot, with the result that the vessels were not very regular in contour. But the Celt knew the use of the wheel, and in place of turning his hand in the clay, he turned the clay and held his hand steady.

NOTE.—There has been an unfortunate misappropriation of terms which confuses ethnological classification. The name Celt has been so long applied to the branch of the Aryan race of which Gaul and Briton are branches, that it is hard to unlearn it. Nevertheless the conviction is daily acquiring strength, that the ancients applied this name to the Iberian, or mixed Iberian and Ligurian, race that occupied Aquitaine and the North of Italy. I have not, however, used the term Celt in this sense in the chapter above.



GRIOTEAUX.

CHAPTER XII

ROCK DWELLINGS

Troglodytes in France—still exist—Grioteaux—La Laugerie Basse—La Roque St. Christophe—Pottery of the Early Iron Age—La Roche de Tayac—Stable—L'Eglise de Guillem—Commarques—Cazelles—Blood-basins—Church of St. Fronto—Grottes de l'Amouroux—How Sandstone Caves were kept Dry—St. Antoine, near Brive—Cave Dwellings at Chastenet—at Laumont—at Cosnac—Church of St. Emilion—Church at Condon—Inhabited Caves at Pougnaudoire—The Caves of Corn—In the Gulf of Réveillon—Intermittent Use of Cave Dwellings—The Clusseaux—Clusseau de la Croux de Boby—Le Trou Bourrou—Le Peuch St. Sure—Rock Castles destroyed by Fire—La Rute—Method of Excavation—The Castle of La Roque Gageac—Autoire—These Cave Dwellings similar to those in Colorado, in Syria, and Egypt—The Probable History of the Rock Dwellings.

VERILY the whole of the south centre of France is a region of troglodytes. In limestone, chalk, sandstone, man burrowed to make himself habitations, or to secure to himself refuges.

Vastly perplexing it is to determine the age of these dwellings, because the population of this region has made its nest in the rock from time immemorial, and continues to do so to the present hour.

At Grioteaux, on the Beune, is a whole hamlet, a hive of houses in a cave, employing the overhanging rock as their roof. At La Laugerie Basse are two families that do the same.

Everywhere the observant eye in these districts will discern the lime and chalk rocks notched, cut about, bored into, giving evidence of having been used previously by those who have built against them, and, in many cases, have built into them.

Opposite Le Moustier, on the Vézère, rises a precipitous rock, 2000 feet long, and about 350 feet high. All the base has been eaten out by the weather, and overhangs; masses of unsupported cornice have fallen, and lie where they fell. Half-way up the face of the cliff runs horizontally a bed of softer chalk than the rest, and this has also been eaten away by the weather.

The first time I ascended the Vézère I passed this crag, La Roque St. Christophe, without noticing anything in particular, except a tower built into the recess half-way up. A second visit revealed to me what an extraordinary place it was.

Every single mass of rock that has fallen from above is cut about, into doorways, into windows, is notched to form stairs, is picked out into holes for the reception of rafters. The smooth face of the cliff is similarly picked out to receive beam ends or corbels of stone, and in one place such a corbel remains *in situ*. One huge mass of rock has fallen at the higher end of the crag face, and when it fell it diverted the course of the Vézère. This natural tower has been carved to form a gateway, and to furnish a guard-chamber. Anciently the gate was only accessible across a drawbridge. Now a road has been carried over the natural moat.

The lower extremity of this rock face, with the terrace above the river in front of it, was formerly protected by an advancing buttress of rock. This has now been blasted to make way for the road. Here may be seen a tunnel



LE PEUCH,

which had been laboriously excavated from the interior surface of the buttress, and carried down to the bank of the river, to enable the inhabitants of La Roque, if hard pressed, to escape by water.

The space between these entrances, an extent of 2000 feet, was at one time occupied by a large population that not only lived under the rocks, but also above the fallen fragments, and in the very face of the rock itself.

A flight of steps has been cut in the cliff, by means of which it is possible without difficulty to ascend to the terrace in the face of the precipice, that runs its entire length, or nearly so, and which is overhung by the harder bed of stone above. When this has been reached, it is seen that the whole ledge has been inhabited. There are cupboards hewn in the rock, beds, benches, ovens; the natural cave has been artificially deepened to form store and bedrooms; where it was possible the rock has been left to serve as party walls, elsewhere divisions have been built up between apartments, and formerly the entire face was screened in by a wall pierced with windows and doors. The very hinge-holes in which the doors swung remain, also the runnels for carrying all the moisture over the edge of the precipice.

There are other chambers hewed out of the rock at a lower stage. There are ranges of apartments in the rock no longer accessible, originally reached by means no longer available, and not easily explicable. On the main platform I took a piece of mediæval pottery out of a groove in the floor.

The first mention in history of La Roque St. Christophe is in the tenth century, when Bishop Froterius, of Périgueux (988-991), built a castle there for the protection of the upper portion of the river against the incursions

of the Northmen. This castle is mentioned in 1187, and then a priory existed at the base of the cliff, as well as a parish church. In 1401, Adhelmar, Seigneur de la Roque,



EAST GATE, LA ROQUE ST. CHRISTOPHE.

who was a strong French partisan, incurred the hostility of the Seigneur de Limeul, who was devoted to the English cause. This latter sent his captain, Jean Ducros, on Passion Sunday, to take the place. He and his men surprised it whilst everyone was in church, whereupon

they pillaged and burnt the town and castle, and hung every man of the garrison along the face of the rock. Since that date, the place is no longer heard of, either as a town or as a castle. There is now no cottage, not even a stable, on its site. The farmer who owns the land immediately below the rock, informed me that there are mosaic pavements in the field, consequently there must have been a Roman settlement there long before Froterius built the castle. On my visit I found under the rock abundance of the peculiar black pottery of the early iron age, in an excavation made for sand. I am convinced that a few more feet of digging would reveal the relics of neolithic, and, lower still, of palæolithic man.

Here, then, we have rock habitations dating at least from early Gaulish times, occupied through the Roman period down to the close of the Middle Ages.

The rock of Tayac, opposite Les Eyzies, is honey-combed with chambers. Here also a ledge of hard rock overhangs some 30 feet, and below it are traces of walls, and there are notches for rafters. A flight of steps leads part way up the rock, and then is purposely interrupted before the face of a cavern. Holes cut in the rock show that formerly this chasm was bridged over by a fall plank that could be raised at pleasure.

On entering the cavern, it is seen to consist of two chambers, and that each contains mangers cut in the solid rock, with holes pierced in the rims, through which the halters passed, remaining more or less perfect.

In the floor of the larger stable is a well. In the midst of the rocky roof are two holes; one, circular, is immediately above the well, the other is above the floor of the stable. By means of a ladder, one can scramble to the upper storey, which consists of excavations above the

floor of hard rock, scooped in a run of softer rock. Here are the remains of an oven; here also was a windlass



STABLE, LE ROCHER DE TAYAC.

that raised the water from the well in the stable floor, through the stable roof. One of the chambers cut in the rock has a fireplace, with chimney, hewn out of the chalk;

and in the roof of this chamber is a hole, communicating with a room in a storey above it.

The rock ledge becomes very narrow after a while, and here it was artificially widened by a wooden floor laid above it, extending over the face of the precipice. The position of the rafters is indicated by the notches in the floor, and the holes to receive the struts cut in the face of the cornice. At the extremity of the ledge the rock was purposely hewn away for a considerable distance, to prevent access from a natural fall or slope on that side.

A second series of chambers, scooped in the cliff, are now wholly inaccessible. The windows and doors hewn in the rock were closed by boards, and the rebates and the places where ran the sustaining beam can be made out. So also can one discover the method whereby this series of caves was reached. This was by a stair of wood, attached to the face of the cliff, for the marks of its sustaining beams remain.

At L'Eglise de Guillem, in the parish of Tayac, on the Vézère, a steep scramble up a rubble incline leads to a face of white cliff, where there remains a fragment of a gateway of stone in courses, giving access to a ledge in the face of the crag above. Passing through this, and mounting to the ledge, we find that it has a rapidly sloping floor under an overhanging roof of chalk. There are traces of walls, showing that it was closed at each end, and faced up in front. The rock is cut out into five beds, like the *arcosolia* in a Roman catacomb, and one of these, being at a higher level than the rest, has a notch cut in the rock to serve as a footstool for ascending to it. Each is 6 feet long. If anyone were now to lie in one of these beds, and roll out in consequence of a bad dream, he would shoot over the lip of the precipice, and fall 200 feet

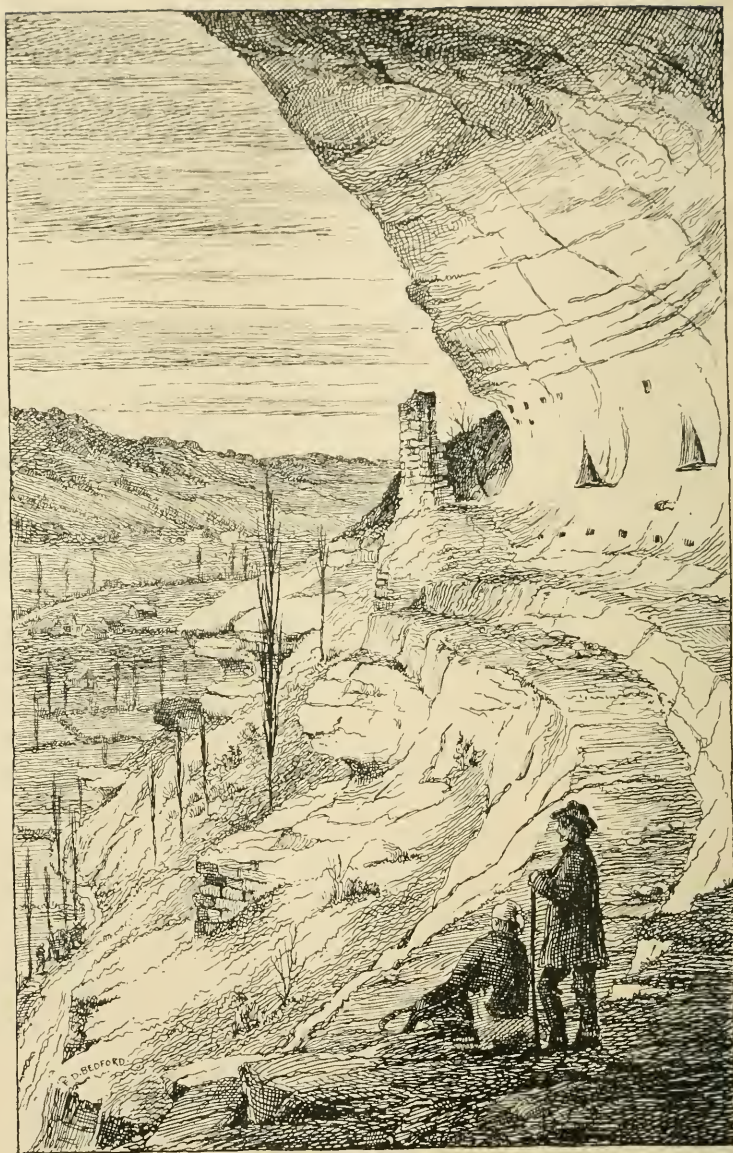
to the Vézère. But formerly a level floor of boards was raised between the face of the wall and the rock. This has disappeared, but the rafter sockets remain.

Another singular feature of this rock dwelling is that above the *abri* is a chamber with a door cut in the rock, and this could not possibly have been reached in any other way than by a jutting staircase beyond the face of the castle, overhanging the dizzy abyss. At present it can be reached only by someone being let down from above by a rope.

To the left of the bedroom a door of masonry gives access to another cave, which has a series of Greek crosses, each about 2 feet square, cut in the floor. A shelf about 4 feet wide leads thence to a cavern of a different character. It consists of a winding passage, penetrating into the heart of the mountain. How far it goes I do not know. Not having lights with me, I did not explore it. At the entrance is a projecting stone, hollowed out like a holy-water stoup. One very similar may be seen in the collection of rock dwellings about La Grotte Richard, above Les Eyzies.

Still farther on, to the left, is a triangular chamber, with a sort of well in its depths. On one side is a bench, on the other what were perhaps mangers. L'Eglise de Guillem is a most puzzling place. It has not hitherto been noticed, and I can find no allusion to it in history. Who "le gros Guillem" was who inhabited this rock nest, nobody knows. Mothers still frighten their children by threatening to give them, if naughty, to "le gros Guillem," who ate children and drank blood.

Above Les Eyzies the whole face of the overhanging precipice is full of traces of habitations. The mediæval castle is in tolerable preservation; it stands below the



L'EGLISE DE GUILLEM.

overhanging natural roof, but the cliff above for a long way is pierced with caves and chambers, some quite inaccessible, save by means of ropes from above.

If the river Beune be traced up as far as the Château de Commarques, a very fine ruin will be seen. The rock crowned by this mediæval stronghold is honeycombed with caves, concealed by trees, but they have beds, cupboards, stables, and guard-room, beside an artificially cut drop, once crossed by a drawbridge, and a gate leading to it, all rock-hewn, and all certainly older than the castle.

But what is more singular is the appearance of the rock in the lateral valley in which is the quarry whence were hewn the stones of which the castle was constructed in the twelfth century. Here the face is scrabbled over with marks of roofs, and is scooped out into chambers, with beds that are now below the surface of the grassy bottom of the valley. The stream that gushes down this glen is so charged with lime that it petrifies or incrusts the roots of the plants growing in the marsh. When a wet season ensues, then the vegetation becomes vigorous, and can resist the petrifying process, but when a dry summer occurs, it becomes stone, and a fresh crop of vegetation springs up above it ; thus the level of this side valley—and the same may be said of the whole valley of the Beune—is gradually and surely rising. The level has mounted as much as 6 feet since these habitations were occupied. Moreover, the remains indicate a considerable population having lived there. The presence of such a number of relics of habitations concealed in the depths of forest, marsh, and mountain, away from every road, in a most inaccessible spot, plainly indicates that those who occupied these dwellings were in hiding.

Farther down the Beune, where the road to Sarlat

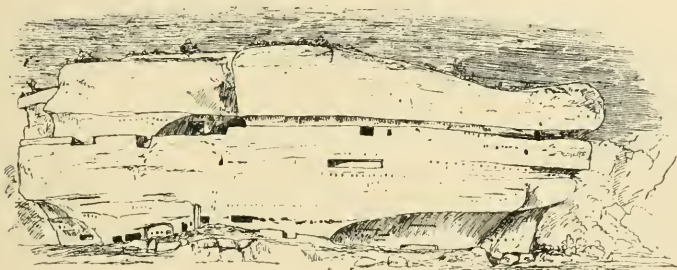


FOREST.

CAZELLES.

branches to the south, is a rocky series of encampments, called Cazelles. Here we have two series of troglodyte settlements, and below the fallen masses at the foot of the cliffs are the remains of the reindeer hunters.

The first series reached shows a face of cliff, with rock chambers half-way up the face. Rooms connected by long passages occur in the horizontal line of soft chalk, and this was originally reached by notches for fingers and toes cut in the smooth face of rock. As boys went up and down at the risk of their necks, the miller who lives near



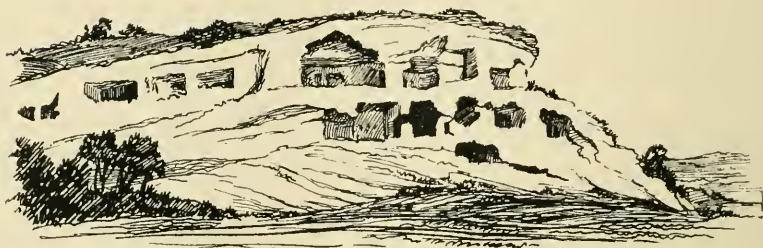
FACE OF A CHALK CLIFF, CAZELLES.

chopped these away. In the illustration will be seen the rafter holes of roofs and floors of buildings that were at some unknown time erected against the face of the cliff. The long niche was a bench.

The second series of habitations was reached in a different manner. A projecting tower of rock was dug into and scooped out so as to form two chambers, one above the other, with communication between them by means of a ladder, and from the upper chamber steps and a passage admitted to the chambers excavated in the heart of the rock. The natural tower has been so disintegrated by weather or by fire that great portions have

fallen, and the interior exposed—it now resembles a great fungus.

Several of the rock dwellings have basins cut in a flat slab near their entrance. From these basins a runnel is conducted to the edge. These basins are on an average 2 feet in diameter, and from 6 inches to 9 inches deep. There can be no doubt that they are artificial, for the tool marks can be distinguished on some of them. For what purpose except sacrificial rites these basins were hewn, it is hard to conceive. There



LES GROTTES DE LAMOUROUX.

is one at the entrance to the cave of Fond de Gomme, another at Le Peuch.

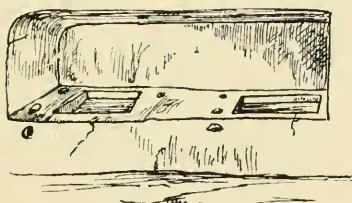
All these “castles in the air” and rock dwellings are attributed by the peasants to the English during the Hundred Years’ War. Yet it is singular that hardly one of them is named in any authentic record as the stronghold of a captain of Routiers. The castles held by these redoubted ruffians are well known. They were structural castles, with their mediæval walls and towers. It is, however, true that, as at Commarques, several of these are planted on rocks which are perforated with these mysterious cave habitations.

Opposite Lalinde on the Dordogne rises a cliff with a

Romanesque church on it, dedicated to St. Fronto. This saint is supposed to have belonged to apostolic times, but his real date is presumably the third century. According to the legend, a dragon occupied a cave in the crag, and the prelate slew the monster. The cave, not very easy of access, is an ancient rock-hewn habitation, and must have been occupied long previous to the eleventh century, when the church was erected above it.

A few miles out of Brive is a cliff of red sandstone. The whole face of this cliff is honeycombed with habitations. They are superposed in storeys, and access from one to the other was by ladders, or by steps cut in the rock. There are as many as five stages of these chambers.

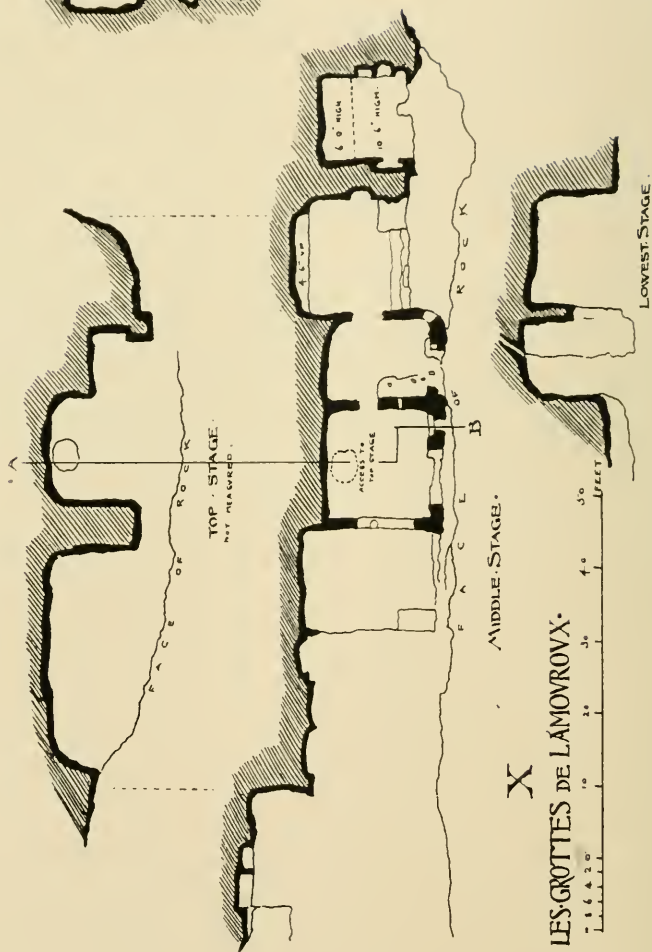
One entire storey is given up to stables, probably for cows, which must have been let down or hauled up by ropes, for there is, and never has been, any other way by which cattle could get access to these stables. The mangers are all rock-hewn. There is a well which was fed by a spring conducted into it from the summit of the rock. There are receptacles for the manure cut in the floor, also silos for grain, lockers, and cupboards.



ROCK MANGERS.

Now the caves gape to the open air; they face the south. How could the inhabitants have occupied them in comfort, thus exposed?

If we examine a little closer, we see notches and grooves on all sides of the openings, like the rebate in a picture-frame; and we learn from this that the inmates boarded up the fronts of these caves. There are deep



holes cut in the rock, into which the beams were thrust which sustained the wooden screens in place.

These habitations do not seem to have been mere refuges in time of war, for there are visible in some remains of plaster and fresco-painting.

Directly below these Grottes de Lamouroux, as they are called, is a field which is occasionally ploughed. It is a kitchen midden of the occupants of the caves, and deserves, what it has not yet received, a very thorough investigation. When I visited it, some fragments of Romano-Gaulish pottery had been turned up.

We are probably not far wrong in supposing that these Grottes de Lamouroux were originally natural, scooped by weather, which were inhabited by prehistoric men. Later they were tenanted by the Gauls, and then enlarged and made more convenient in the Middle Ages. It is certain that the enlargement belongs to two epochs; for two sorts of tool marks are distinguishable on the stone. In one cluster of chambers is a pillar that has the characteristics of the twelfth century. The sandstone is very pervious. It is full of faults, and through each fault water descends. Consequently, the sandstone caves are wet. The occupants of the caverns were, however, quite capable of meeting the difficulty in a most ingenious manner. Wherever there was a drip, there they dug a channel in the sandstone, and carried the water along the side of the cave at an incline, into little reservoirs, and thence again beyond the grotto, thus keeping walls and floors dry.

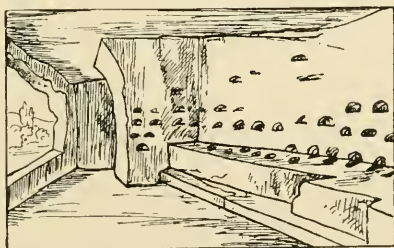
At the distance of a mile from Brive is another sandstone rock-face with four caves in it. On the top of this rock a Capuchin convent has been built. One of the grottoes is converted into a church; the other three

are closed with rails, and adorned with statues of St. Anthony of Padua, and of the Blessed Virgin.

Above these caves are notches cut to receive beams, so that undoubtedly at one time lean-to roofs supported on walls screened the openings of these caves. The ingenious contrivance of channels in the sides may be observed here. In the church are traces of the grooving for boards. Unhappily the friars have dug down the floor of the cave some six or eight feet, and have otherwise mutilated the walls, destroying much of the antique character. Nevertheless, enough remains to show that this cave-church was at one time inhabited like the grottoes of Lamouroux.

Now, St. Anthony of Padua came to Brive in 1226, and was there for about a year only. He founded a convent in the town, but came to these caves for prayer and meditation. In the life of the saint, written not long after his death, we are told that it was he who cut the channels in the rock to collect and carry off the water. This is interesting, for it shows him employing a means no doubt traditional.

On account of the dampness of the walls of these caves, whatever touched them became mouldy; accordingly they are provided with holes in the roof, through which sticks were placed, with a string attached in the middle, from which baskets and bags were suspended containing the goods of the household.



ROCK PIGEONRY.

Another collection of cave-dwellings is at Chastenet,

where there are eight habitations, one of which contains something like fifty pigeon-holes; in fact, the cave is a pigeonry. The same sort of thing is to be seen at Les Baux, near Arles, where is also a pigeonry cut out of the limestone amidst the ruins of the ancient castle of the Grimaldi family.

At Brantôme is a huge cavern containing strange carvings representing the triumph of Death, and this has its walls riddled with holes for the same purpose. It was primarily the hermitage of the monks and then their pigeonry.

At Laumont, in the valley of Planchetorte, are twelve habitations in four storeys. The entrance to them is difficult, and was so contrived that access was interrupted at pleasure. Some of these were reached originally only by means of an exterior balcony, now gone.

In the valley of the Courolle, south-west of Brive, at Siaurat, is a group of fifteen in two stages. All the habitations communicate with an exterior corridor, the extremities of which could be closed. In the midst is a stable, with its mangers; but what is specially interesting is the fact that a date (1585) is cut into the rock at the entry to the stable.

In the commune of Cosnac is another group, Les Roches. Here four of the caves are still inhabited. One of these contains a pilaster, surmounted by a Romanesque capital, adorned with rude heads cut out of the solid rock.

The monolithic church of St. Emilion is out of the district I am describing, but is so illustrative of the way in which the rocks of sandstone were utilised in the Middle Ages, that I venture to say a few words thereon. St. Emilion is a little walled town at a short distance from the

Dordogne, near Libourne. In the centre of the town rises a rock of sandstone surmounted by a flamboyant spire. The heart of this rock has been scooped out to form a church that consists of a narthex or vestibule, and a nave with three aisles. The height of the nave is 36 feet, and the church is 120 feet long and 60 feet wide. The aisles are divided from the nave by quadrangular piers, with a bead at top, but no capitals. The arches are stilted. There is no sculpture in the church save a centaur cut in a spandril, and a chancel arch fashioned out of two gigantic angels, with wings expanded and heads opposed.

The front of the church towards the market-place is of flamboyant work, and much later, but some of the early round-headed windows remain, and serve to light the nave and aisles.

Beneath the church is a crypt with conical vaulted roof; it is full of recesses for graves, like those in a Roman catacomb. Near this monolithic church is another crypt which was traditionally held to be the hermitage of the saint, and contains his bed cut in the rock, and his fountain. St. Emilion was a disciple of St. Martin, and died in 767.

The monolithic church of Codon, near Domme, bears indications of rock habitations about it. Indeed, there is an arched bed cut in the exterior wall of the church itself. One of the clusters of churches under the overhanging rock of Rocamadour has the natural limestone for its roof and side; and here is the hospice, in which pilgrims are received, built against the face of the cliff, and reached by a passage scooped out of the face; the rock itself within the building is cut to form stairs and chambers and store-rooms. This hospice resembles a swallow's nest hung under the eaves of the crag above the town.

At Pognadoire, on the side of the Tarn below St. Chély, is a cave at present occupied by two families. I visited it, and the woman very good-humouredly showed me over her habitation. The natural cave is of peculiar shape, like a capital **F**, and has a double opening. That to the south is walled up, where the head of the **F** stands, and has windows in it, and this portion forms the living-



INHABITED CAVE ON THE TARN.

room of the dwelling. Access to it is obtained by the other hole, the lower stroke of the **F**, which has a wall drawn across it, with a gateway in it. The cave runs far back into the mountain, and has several branches, one of which leads down a steep incline to water. The children will find their way thither without a candle, and without fear, to fill their pitchers. The interior of the cavern has been partially explored by Dr. Prunières. His lamented death has arrested his researches therein. He

found the remains of cave-bears and of men of the neolithic period.

Higher up the river is another cave yawning in the face of the salmon-coloured cliff. In this also may be seen the ruins of a habitation, probably a castle.

Those who occupy these rock dwellings are attached to them. They say that they are dry, airy, and that the temperature never varies greatly in them.

At Corn, in the valley of the Célé, are two caverns communicating with each other by a natural terrace. The first is reached by a narrow path cut in the face of the rock. The ledge in front has been deliberately cut away so as to make access to it impossible by any other manner than steps that could easily be defended. Thence the second cave is reached, which is called the citadel. The path is narrow and only to be trodden by one with a steady head. Hither fled the inhabitants of Corn to escape the English marauders. Below the citadel is a cave in which they concealed their treasures. In the first cave the citizens were wont to assemble annually for the election of their consuls.

At Brantôme, on the Dronne, the houses on one side of the river are built into the rock, and in their rear are extensive chambers and storerooms that have been excavated. It is possible to go a long way under ground in the great halls that have been dug out for building-stone, and which are piled up with firewood, casks, etc. One is turned into a blacksmith's forge, another into a wheelwright's shop.

One of the oddest places chosen as a rock habitation is a ledge in the Gulf of Réveillon; here, 160 feet above the bottom of the well, on a shelf overhung by the concentric ribs of the barrel-shaped chasm, are walls of

masonry enclosing caves once inhabited. The rock not only overhangs 30 feet, but rises above the ledge some 40 feet. It is hard to conceive how building materials could have been conveyed to this almost inaccessible spot.

At St. Mondane, on the Dordogne, are some well-preserved habitations with doors, windows, drain channels, rock hewn, in a little glen that leads from the village to the castle of Fénelon. The little valley of the Couze has also habitations excavated in the rocks, but these I have not visited. The caves by the village of Couze itself are merely quarries.

It is strange that the rock habitations have not been made an object of special study. Some, undoubtedly, have been strongholds of brigands. Others as certainly have been the refuges of those preyed on by marauders. To the latter class belongs a habitation near Le Peuch, hard by a quarry not far from the ferry to Les Eyzies. A door cut through a rock gives access to a curious series of tunnels, with all the marks of human occupation in the walls, niches for lamps, cupboards, presses, beds, etc. The whole is so hidden in bushes and brambles that it might be passed repeatedly without being observed. Moreover, throughout the chalk district there are subterranean refuges called *clusseaux*, like the Danes' holes in Kent. These were entered from the surface of the soil by a descent of many steps, sometimes by a well, in the bottom of which passages are found that radiate to vaulted chambers, all rock-hewn. These are usually discovered by the falling in of roofs. A peasant is ploughing, and suddenly sees his ox sink before him and disappear. Lo! a *clusseau* has been revealed. Several of these have been planned, but usually they are at once filled in with earth immediately after having been discovered, to avoid



ROCK DWELLING, LE PEUCH.

accidents. The passages in these clusseaux always show the groove into which the framework of a door was fitted, as well as the holes for receiving the bar that fastened it. In the clusseaux elaborate provision is made for defence. For instance, in that of La Croux de Bobby the entrance is by a curved passage, with a door. A guard-room commanded the entrance. It was furnished with a series of narrow slits or *meurtriers*, through which the defender could stab at the assailant. The sentinel had his rock-hewn bed in his guard-room. On the side of the passage opposite the guard-room door is a deep niche in the rock, in which another guard might ensconce himself. It would be almost impossible for any man to force his way in against such odds.

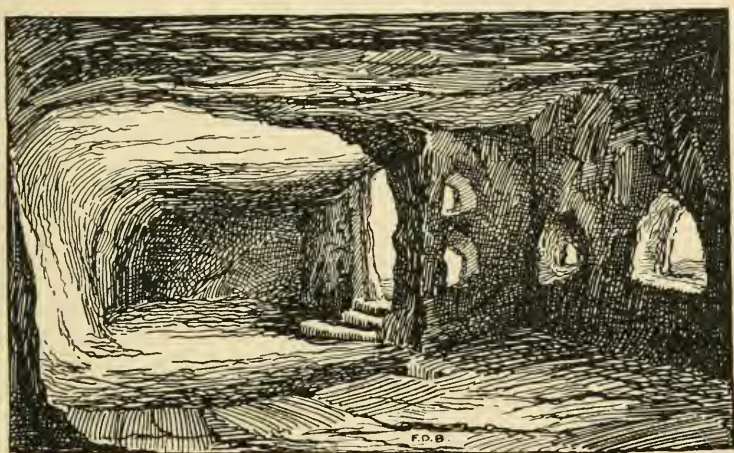
Near the clusseaux are often found *silos* cut in the chalk for containing grain. In some cases their covers have been found *in situ*.

Very similar to the Clusseau de Croux de Bobby, in its method of defence, is a cave in the Beune Valley, called Le Trou Bourrou. It is reached by climbing a steep rock; notches have been cut in it for the feet. Then a path on the ledge of the rock leads to a door. Two holes, the one oval, the other round, have been cut through the rock inside the cave into which the door gives admission, and through these holes a spear or sword could stab any man who approached the door, or even a stout stick could thrust him over the edge of the precipice. Within is a chamber lighted by a window. It is interesting, for the occupant, whoever he was, began to deepen his floor, and never finished what he began.

At Le Peuch, on the right bank of the Vézère, are three groups of rock castles. One (see illustration, p. 233) can be reached by tying two ladders together, when a

chamber is entered, which, however, leads to nothing save through the roof. A third ladder must be drawn up by a rope and planted in this cave, and then by means of it a series of chambers is reached that communicate with each other at a higher level. The face of some of these was originally walled up, and the walls remain.

A second group is now inaccessible, except by a rope from above.



LE TROU BOURROU.

The third (see illustration, p. 255) is reached in a different manner. A buttress of rock has been scooped out into a guard-chamber, with two doors and a window, and a bench on which the gatekeeper could rest. The main body of this castle in the air can only be arrived at by passing through this guard-room. Then a ledge is reached which is not continued. Standing on the ledge, one sees before one the excavations of the main habitation, and the way to them is by means of nicks cut in the face of the cliff, in which the feet can rest. My guide,

a boy, kicked off his sabots and ran along the face of the rock like a squirrel. But a further means of protection was devised. The door could only be reached by passing in front of a window, through which a hand could thrust an assailant down the precipice.

In the lime and chalk dwellings, where there are no wells and no springs easily accessible, the walls are scored with lines to catch the moisture condensing when the air is warmer than the rock, and carry the condensed water into receptacles scooped to hold it. Moreover, there are to be seen nearly everywhere loops cut in the rock of the roof, from which to suspend such articles as might become mildewed by touching the rock, just as in the similar habitations cut in the sandstone. Many of these rock castles have become greatly injured. They show like yellow sugar in the face of ash-grey cliff. The reason is this. According to tradition, when they were occupied by freebooters, the peasants assembled, and, after having piled bushes, barrels of pitch and tallow on the top of the cliff, they set all on fire and rolled the blazing and molten mass down over the face of the rock, setting on fire all such roofs, galleries, and beams as projected. These, when burning, carried the flames within and consumed whatever could kindle in the rock dwellings. Not only so, but the heat split and injured the chalk, which crumbled away as far as was affected by the heat. The yellow condition in which some of these rock castle faces are, is a sure indication that they have been destroyed by fire.

At, or above, La Rute, on the Vézère below Le Moustier, are the remains of a rock castle that has been destroyed in this manner, so completely that the surface of the rock has flaked and scaled away, and it is only



LA ROQUE GAGEAC.

here and there that the tool-marks can be detected, showing that the excavations have been artificially made. Indeed, I should hardly have recognised it as one of these strongholds but for tiles let into grooves cut in the rock, showing where roofs formerly had started. In a good many places may be seen a feature that at first puzzled me, an arched recess containing three to seven parallel vertical grooves. I ascertained that this is the manner in which the quarrymen still work when boring a tunnel or gallery. With a peculiarly shaped pick they cut a series of grooves some six feet high, and then split away the rock between them. They continue the process, gradually advancing into the rock. Such recesses with grooved backs accordingly represent passages or chambers begun, but the work interrupted—probably by the capture of the fastness before all its excavations were completed.

Perhaps the best preserved of the “castles in the air” is that of La Roque Gageac, on the Dordogne, over against Domme. This little fortress and walled town was held by the Bishop of Sarlat, and was never taken by the English who occupied Domme.

The huge cliff shoots up to the height of 400 feet above the river. The first portion is at a rapid incline, and this incline is built over by the inhabitants of the little town. Their houses cling like limpets to the rock, and one is above the other, so that anyone desirous to know what his neighbour below has for dinner has merely to hold his nose over his chimney, out at his own open window.

High up in the face of this sheer cliff is seen a castle built in a cave. It is in a comparatively perfect condition. It was never destroyed, for two very good reasons: the

first is, that it was never captured, but remained a French stronghold throughout the three hundred years of English domination; a second is, because to overthrow the walls of this castle would be to smash every roof of the town that lies below it. To reach this castle a stair was constructed by driving pegs into the face of the rock. For two hundred years the castle remained inaccessible, the haunt of eagles and owls; till, a couple of years ago, the present proprietor of the house and platform below reconstructed the stair.

The face of the cliff is 900 feet long, and this is not the only castle in it. There is a second series of chambers dug out of the rock, but these are now inaccessible.

Domme, over against La Roque, was taken by the English in 1347, retaken by the French, and taken again and remained in English hands till 1438.

What the English failed to effect was done by the Huguenots. In 1568 an army of Calvinists swept down the Dordogne, murdering priests and burning churches. In 1588 their captain, Vivant, took Domme, where he said:—

Plutôt pape quittera Rome,
Que Vivant ne quittera Domme.

He did not rest till he had forced La Roque to capitulate, March 5, 1589.

At Autoire, in the magnificent cirque already referred to, the doorway into the “Château des Anglais” that is plastered against the cliff, is of a flamboyant character, exactly resembling one of a château in the village, that belonged to the same family.

I was informed that the commune possesses in its archives deeds which were signed and sealed in the eagle’s nest in the cliffs.

This fastness, which was occupied in the Hundred

Years' War, was restored in the Wars of Religion, when a refuge again became necessary against the Huguenots. Vines grow wild below the castle, remains of its ancient vineyard. From the ledge occupied by the remains, access can be had by a climb up a rock to a slender track in the face of a sheer bluff, and this leads to a series of artificially hewn chambers, to which the defenders of the castle could fly as a last resource. There was, however, another alternative open to them. When hard pressed, they might escape along a shelf up the cirque to a point where grew a lofty tree, and up this tree they could scramble to a ledge in the cliff, whence they could reach the surface of the *causse*. The tree is now dead, but the stump is still pointed out.

The Castle of Autoire stands 450 feet above the bed of the valley, and the rock rises 50 to 60 feet above it. Outside the door, on a ledge, is the castle oven. The chambers were none of them more than 8 feet wide. It had the living rock for one wall and for roof.

The Château du Diable at Cabrerets on the Célé was also of small proportions. It consisted of an entrance tower, 14 feet in diameter; then of a hall, 23 feet by 13 feet; of a tower only $6\frac{1}{2}$ feet in diameter, and of a chapel or store-chamber, barrel-vaulted, measuring 14 feet by 10 feet.

I have mentioned but a few out of the multitude of rock habitations and castles poised in the air that remain. They resemble the troglodyte dwellings in the cañons of Colorado, and others that exist in Egypt, Arabia, and Palestine. They possess, however, this advantage, that they can be reached in twenty-four hours from London. They are hardly inferior in interest to any found in the New World or in the East.

No satisfactory conclusion as to their original occupants can be reached till they have been carefully explored and compared, and the spade and pick used under their windows. But I have little doubt that their history may be thus summed up.

They were occupied first of all by the Gauls of the early iron age, who enlarged natural caverns and excavated others.

In the terrible period of the decline of the Roman Empire, when the Imperial system weighed like lead on Gaul, and produced depopulation; when there were more bloodsuckers than wretches to be sucked; when the taxes killed all life and energy out of the people, till at last, oppressed beyond endurance, the great insurrection of the Bagaudæ broke out,—then, I suspect, these habitations were largely resorted to. The dwellings in the rock half smothered in marsh under Commarques point to a period when a considerable population had carried off its cattle and concealed itself in the remotest fastnesses of the wilderness. There were no roads there, not a village was near. Even now not a soul may be seen on the recently constructed road, which has opened out the valley of the Beune. Those who lived at its sources, in the abysses of primeval forest, in the midst of rocks and marshes, lived there not to prey upon travellers, but to escape being preyed upon.

Very probably these are the retreats of men who hid themselves from the extortionate tax-gatherers of the later Roman Empire, when the Romanised Gauls welcomed the barbarians as deliverers.

During the periodical incursions of Saracens and of Northmen, these caves were also retreats to which men retired with their valuables.

Throughout the wars of Henry II. of England and his sons, undoubtedly all who could fled to these retreats. So also during the miserable epoch of the Hundred Years' War. So also during the Huguenot devastations. And lastly, these caves became refuges for priests and nobles during the Terror.

Such I believe to be their history, and such, I think, will be the story revealed by spade and mattock, when they are systematically investigated.

CHAPTER XIII

LE PUY D'ISSOLU

The Story of Uxellodunum—Le Puy d'Issolu—A Gaulish *Oppidum*—The Nature of an *Oppidum*—Investment of Uxellodunum—Tapping the Spring—The Discovery of Cæsar's Mine—Other Camps in Quercy—Vitrified Forts—Those in Creuse—The Origin and Date of these Glass Castles—Burning of Walls in Hissarlik—Vitrified Tombs.

THE story of the last desperate struggle of the Gauls against Cæsar, and of the final stand made at Uxellodunum, is too well known to be here told again. But as the scene of this tragedy is in the heart of the country I am describing, and the place itself is of such extraordinary interest, I cannot pass it over unnoticed.

In the year 52 B.C. insurrection flamed throughout Gaul. Julius Cæsar was away in Northern Italy, and for once the several tribes combined against the common foe. Cæsar flew to the scene of revolt in winter, and defeated the allies. The final stand was made at Uxellodunum, a stronghold of the Cadurci—the tribe occupying Quercy—under two chiefs, Lucterius and Drappes.

Uxellodunum, there can be little doubt, stood on the Puy d'Issolu, near Vayrac, close to the line from Brive to Figeac.

It is a limestone plateau, surrounded by precipices except only at one point to the north, where a neck of

land joins it to another height, the Pech Demont. The summit of the Puy d'Issolu is an undulating plateau 650 feet above the plain of the Dordogne, and the limestone escarpments are in some places 130 feet high. On the west side flows the little river Tourmente, which enters the Dordogne. Hirtius says it surrounds the rock, but this is not the case. The plateau forms a rude diamond about a mile and a half long, and three-quarters of a mile wide. At its highest elevation it reaches 950 feet above the sea level. There are on it arable land and woods, chestnut and walnut trees. There is an uncertain spring to the south-east, but the supply of water there is small; it trickles down a rift in the limestone, forming a narrow way under trees for one portion of the course, by which access may be had to the plateau from the direction of Vayrac.

On the opposite side, however, is a copious source, which formerly rose very near the rampart that defended the edge of the ravine, and flowed down to the Tourmente in a steady stream. In process of time this leakage has broken away the hillside, and formed a coombe that runs up at a steep angle among the white rocks, and affords nutriment to the roots of many trees and bushes. Up this slope, also, the top of the plateau can be reached, but not by an enemy, as it is commanded by the jutting precipices on both sides.

Uxellodunum was not a Gaulish town, but an *oppidum*, that is to say, a fortress to which the inhabitants of the plain could fly and convey their household goods in time of danger. No doubt, in a season of tranquillity some farmers occupied the camp, tilled the land, and maintained their cattle on the heights, as they do to this day at Puy d'Issolu, but ordinarily, the Gaulish people were scattered

over the plains and in the valleys, and only had recourse to the camp of refuge when menaced by an invasion. This seems to have been the general system of all Celtic races. We have in England a vast number of these camps, and we somewhat hastily conclude that they indicate the site of towns. Nothing of the sort; in Britain, as in Gaul, they were refuges only. At Tulle the present town occupies the site of the ancient town; above it is a rock now completely given up to the dead. It is the cemetery, but anciently it was the *oppidum*, the camp of refuge. Every tribe, every subdivision of a tribe, had its own stronghold.

There are plenty of these old fastnesses on the plateaux of Quercy, but of all these Uxellodunum, the Puy d'Issolu, is the best defended by nature, and therefore was chosen by Lucterius and Drappes.

An *oppidum* comprised ordinarily a continuous wall, embracing the entire circuit, and following all the contours of the height. This great wall was sometimes from 24 to 30 feet high; rarely less than 9 or 12 feet. The area enveloped by this wall was often considerable; it was necessarily so, as flocks and herds had to be accommodated there as well as people. Some of these fortified plateaux contain no less than 470 acres, but usually they enclose from 75 to 125 acres. The walls are constructed of rubble and earth, encased by dry walling of larger stones, among which may be found fragments of pottery. The wallcase was braced together with large oak beams, crossing each other like the timber houses of the Middle Ages. The rotting away of these beams has invariably ruined the walls, which are now represented by rubble mounds.

Internally, palisades divided the camp into sections, so that, should the main wall be escaladed, a stout defence

could still be maintained behind these ranges of posts. Moreover, all the weakest points of the wall were reinforced by a number of outworks, occupying higher ground if possible, and these were the *castella*, detached or engaged according to the nature of the position.

Where the wall was not naturally protected by a precipice, there deep trenches were dug, so as to isolate the camp as completely as possible. Piles of stones were kept in readiness to roll down on the enemy if they ascended the slopes, which were cleared of trees and shrubs, behind which the foe might lurk. Thus an *oppidum* was a citadel, with its glacis, its wall, its moats, its towers, its hornworks, and its redoubts. Brave men could maintain a siege therein for months at a time, and the limit of resistance was marked by that of supply of food.

This question of victualling was far from being neglected. In the first place came water. When a spring or stream was on the plateau it was well; but as such a supply was exceptional, those who took refuge within the citadel were expected to bring in with them not only their corn and cattle, but also wine and supplies of water. This was done by means of great jars, or *amphoræ*, with two handles, which were carried up on the backs of mules, by the steep and rough paths. In the haste in which these emigrations took place, a great number of these jars were broken, and no doubt also, in the event of a capture, or when the camp was deserted, those that remained were knocked to pieces. This will explain a constant phenomenon in these camps of refuge, the enormous quantities of broken jars that are turned up by the ploughshare, and are strewn about the ruined walls.

The Romans invested the fortress-refuge of Uxellodunum, and Lucterius and Drappes, fearing lest their

supplies should fall short, left it to collect what they required, and, whilst they were introducing convoys into the place, the Romans fell on these and cut them to pieces. Still Uxellodunum held out, and Cæsar saw that the only way in which he could reduce the place was by cutting off the supply of water. To effect this he determined to drive a mine into the heart of the mountain, and tap the copious spring that gushed out of the rock high up on the west front and supplied the besieged.

To carry out this he was obliged to cover his miners whilst engaged at their work. What the purpose of Cæsar was the besieged could not comprehend, but they made desperate onslaughts on the men engaged on the mine, and rolled down barrels of blazing tallow upon the works. For the defence of the miners, Cæsar constructed a platform 60 feet high, surmounted by a tower of ten storeys, which commanded the whole side of the mountain from the spring to where it flowed into the Tourmente. From this tower a constant shower of arrows and stones made approach to the fountain dangerous to the besieged, and they lost many men, wounded or killed in their attempts to get water.

Meanwhile the work of the miners was not as successful as had been anticipated; they had bored through the lias rock till they reached a dense mass of blue clay. After some hesitation, whether to attempt to pierce this or to turn round it, they adopted the latter course. They had, in fact, reached that bed which prevented the water from the height from sinking to a lower level, and held the spring high up near the top of the cliffs. The miners now turned to their left, and worked on for 12 feet, when they came on very hard rock. They therefore abandoned this gallery, and returned to the former point, and worked

thence upwards over the marl, and presently tapped the spring, which at once deserted its former mouth, and flowed away at a lower level, quite out of reach of the besieged.

The people of Uxellodunum, seeing their perennial fountain suddenly dry up, were seized with despair; they thought it was the work of the gods, and they surrendered.

Cæsar determined to make an example of the gallant defenders of Uxellodunum. He cut off the right hand of every man found in the place. Drappes, either from vexation at being held in chains, or through fear of a worse punishment, starved himself to death. Lucterius, who had escaped to the country, fell into the hands of a native partisan of the Romans, who delivered him up to Cæsar. We are not told what became of him, but it is not difficult to guess that he was reserved for the triumph of the conqueror of Gaul, along with Vercingetorix, and then strangled.

The exploration of Puy d'Issolu by order of Napoleon III. has satisfactorily determined the site. The tunnel made to draw off the spring was opened; it is now, however, again choked with the mud brought down by the little stream, and can be examined for a short distance only. In it were found numerous remains of the posts and tools employed in its construction and in the support of the roof.

The old Gaulish walls on the summit are in complete ruin, and are much disguised by modern erections on their tops. The old walls, however, may be distinguished by their great thickness. Owing to the mode of construction, they have resolved themselves everywhere into rubble heaps.

Over the whole surface vast quantities of broken pitchers, querns, and other antiquities are turned up. They

lie deeper than where goes the ploughshare, and belong to all ages. I saw a gold Gaulish coin, some Merovingian beads, and a sous of Louis XVI.

The top of a wall near a farmhouse was covered with a row of hand querns. Numerous flint flakes, knives, and scrapers are also found on the plateau, showing that this was a place of resort in prehistoric times, before the Gaul invaded the land, and called it after his name.

Another very fine camp, nearly as extensive, is at Murcens, and dominates the valley of the Vers that flows into the Lot below St. Gery. Here the mound of ruined wall can be followed for a considerable distance, and here also the ground is strewn with broken pitchers. Silver coins were shown me by the farmers, dug up in their gardens within the enclosure, and iron ones plated over with silver—false coins, in fact. These coins are of Rhoda, a Rhodian colony in Spain. A few years ago a large quantity was found in a hedge near Brive. The local antiquarians think them to be Cadurcian coins, but they are clearly not so.

In Quercy there are other interesting and well-preserved camps. Such is Le Camp des Césarines, near St. Céré. Here a farmer is locally believed to have dug up a pot of gold coins. The peasants say that so only can his sudden expansion into a man of wealth be accounted for. Another is L'Impenal. A curious camp is on the heights above the Célé at Brengues.

One of the hardest nuts to crack for antiquaries is that of vitrified forts, that is to say, forts of stone which have been cemented together by the action of fire. There are no such glass castles in England, as far as we know. There are very few in Ireland. They are numerous in Scotland. They are found in Germany, in Belgium, and

in several parts of France. Some have been observed in America. These glass castles lie almost always on high ground. In the absence of mortar the walls were melted together into one concrete mass by means of intense heat.¹

There is only one of these vitrified forts in the district I have undertaken to describe, and for very good reason—that limestone and chalk do not vitrify, but go to dust under fire; but there are many where the granite appears, as in Creuse. The one glass castle in Dordogne is in a loop of the river Loue at Gandumas, north-east from Excideuil, and is locally called the Saracen's Castle. The peasants have been making havoc of the glass walls, which inconvenienced them in their agricultural occupations, and they have broken them up, and rolled the fragments down the steep slope, where portions may still be collected. Some slight excavations have been made, but inadequate to give results of any value. There is a vitrified fort in Brittany where there is a Roman tile adhering to the melted portion of the wall.

At Pionat, on a height above the river Creuse, is an oval fort, measuring 380 feet in its largest diameter, and the walls have been in part subjected to such intense heat that they have been resolved into glass. It is called Le Château Vieux, and the walls are constructed on a basement 21 feet wide. The wall is cased outside and inside with granite blocks laid in courses; the core, so to speak, is composed of a vitreous mass, 2 feet thick, of melted granite, reposing on the calcareous tufa of the mountain. The

¹ For the vitrified forts in Scotland, see Anderson, *Scotland in Pagan Times, The Iron Age*, 1883. German vitrified forts are Stromberg, near Weissenberg; others on the Rhine, one in Bohemia; that in Bohemia explored by R. Andrée, those on the Rhine by H. Grebe.

entire core is completely turned to glass, and forms the hard nucleus of the walls, exactly reversing the ordinary construction, in which the centre of a wall is softer than the exterior face.

On the opposite side of the Creuse rises another fort of the same character, named Ribandelle; it is, however, circular instead of oval. It has been successively occupied by Celts, Romans, and Visigoths. The walls are cased with rough blocks externally unaltered by fire, whereas internally the core is molten, and the inner surfaces of the casings have been fused. The core was of granite, and the fusion so complete that the whole must have run together like honey. The entire thickness of the wall is 9 feet.

Another of these glass castles is that of Thoron, about three miles west of Pontarion. It is 390 feet in diameter. Unhappily it is gravely dilapidated, but the fused masses strewn about show what was its original character. At Puy de Gaudy is again another. It occupies the summit of a hill, and has a line of Roman fortification round it. There are, in fact, the remains of three camps on the spot, but that which is vitrified is the most perfect. The wall is now only 3 feet high, and rises from a platform 12 feet high. In the centre of the wall a yellow clay has been mixed with the granite before fusion.

Now let us look at another series of monuments. In Creuse, at Chénérailles, are three tumuli, that were examined in 1865; they revealed sepulchral chambers constructed of vitrified granite, precisely like the forts just spoken of. So also in the department of Loire, at Marchezal, is the vitrified fort of Châteaulux, and hard by a tumulus that contains a glass chamber of the dead, which had in it an iron horseshoe.

It is singular that folk-tradition should have preserved reminiscences of these fused castles and molten tombs. The glass castle or palace often occurs in old fairy tales, and in *Little Snowflake*, when the damsel was apparently dead, the prince who loved her consigned her body to a glass coffin. *How* these walls were melted is hard to explain. If the fire had been maintained outside, then the exterior crust would have dissolved into glass, but the glass is in the interior. One writer, M. Thuot, who examined carefully the fort on the Puy de Gaudy, was so perplexed with the phenomenon that he argued the constructors must have melted these walls by chemical action. In 1881, M. Daubrée examined the fragments of four of these vitrified forts in France (La Courbe, St. Suzanne, Château Vieux, and Puy de Gaudy), and, by analysis, ascertained that sea-salt and sand had actually been employed as a flux in their construction.

Now let us see what we can arrive at relative to the *date* of these mysterious glass castles.

We must go back to the construction of the Gaulish fortresses. These were of stone and wood, as Cæsar tells us. That is to say, the Gauls knew nothing of mortar, and to compact their walls they tied them together with wooden beams. The cyclopean walls in Greece and Italy were raised by men who knew not the use of lime, and they sought to hold their walls together by gravitation. But it was not everywhere possible to get, and if got, to wield, such vast masses of stone. Consequently, other methods were adopted to make strong walls, and such was the combination of wood and stone common among the Gauls. In all likelihood the inner fabric of the wall was of wood and stone, and it was faced, at all events externally, with large stones. But this was not always the

case; the remains of Gaulish *oppida* I have seen show little evidence of stones having been laid in courses.¹

Now this system of building was a clumsy one. The wood was certain to rot, and as it rotted, the whole wall gave way. Perishable wood was the bone that formed the structural element. Moreover, such walls were liable to be reduced by fire. In limestone districts an enemy could easily bring down into a crumbling heap such a fortress which had in it wood to convey the fire throughout the structure, and pulverise it. Experience, no doubt, taught the Gauls that such an attempt to reduce one of their forts succeeded in limestone, but failed in one built of granite, for under the flames partial fusion took place, which made their walls more secure than they were before. Having discovered this, they built their walls on the same principle, with beams going in all directions, and then deliberately fired them. The beams kindled and carried the flames into every part, and fused the whole wall into glass. The experience of the use of sea-sand and seaweed as a flux induced them, at great labour and cost, to transport these materials from the sea-shore far inland, and lay them as mortar between the granite stones previous to firing.

We may learn something relative to this system from Schliemann's discoveries on the site of Troy. As is well known, he exhumed the remains of six cities, one superposed on the other.

The first and earliest settlement was fortified with walls of rude limestone blocks unworked. Clay was employed, but not burnt.

The second settlement was surrounded by a fortifica-

¹ Even in the Middle Ages, and down to Tudor times, wood was employed in domestic architecture as a tie in stone walls in England.

tion, the basis of rude stones, not laid in mortar of any sort, supporting a brick wall, the bricks sun-dried, and laid in very fine sifted clay. Then, to consolidate the whole, fires had been kindled outside and inside to burn the walls into one solid mass. But as the walls were too thick for this, a certain depth only was affected by the flames, and the lower portion more than the upper. In order to carry the flames through the walls, passages—chimneys, in fact—had been constructed, opening from within, and leading towards the outer surface. It is only in the third city that Schliemann found burnt tiles—that is to say, the discovery had been made that it was better to burn the tiles, and build of them, than to build the walls and burn them after.

The vitrified tombs at Chénérailles are said to have contained ornaments of the Visigoth period; but we can scarcely suppose that the glass castles are so late. They obviously belong to an intermediate stage between wood and stone walls, and walls of stone laid in mortar. With the conquest of Gaul by the Romans, the use of mortar was learned, and the occasion for firing their walls was at an end. It is, however, possible that an usage abandoned long ago for constructive purposes may have continued in funeral rite.

CHAPTER XIV

DUKE WAIFRE

Aquitania—Its early Dukes—Saracen invasions—Duke Eudes and Charles Martel—Pepin and Duke Hunald—Abdication of Hunald in favour of Waifre—Contest with Pepin—Rock Castles in which he took refuge—Continuation of the contest—Brennus—Attempt to enter his last hiding-place—Defeat of Waifre—He escapes into Périgord—is murdered—The Pears of Waifre—His tomb at Limoges.

“AQUITANIA,” says Michelet, “backed by the Western Pyrenees, which are still occupied by the ancient Iberians, Vasques, Guasques, or Basques (Eusken), was incessantly recruited from these mountaineers. This people, by taste and talent devoted to agriculture, brigand by situation, had for long been nipped among the rocks by the Romans, and then by the Goths. The Franks drove away these latter, but did not take their place. They failed to make headway against the Vasques, and charged a Duke Genialis, no doubt a Roman of Aquitania, to watch them. This was about A.D. 600. However, the mountaineers descended upon the little men of Béarn, in their great red capes, shod with their hair abasca ; men, women, children, flocks and herds, advanced northwards. The Landes form a mighty highway. Firstborn of the old world, they came to reclaim their heritage in the beautiful plains which had been parcelled up among so many usurpers in succession, Gauls, Romans, and Germans. Thus, in the

seventh century, at the dissolution of the Neustrian Empire, Aquitania was flush with Basques, just as Austrasia was flooded by new German immigrants. Their



MALPAS, A ROCK CASTLE ON THE VÈZÈRE.

racial names followed each race; the north was called France, the south Vasconia—that is, Gascony. This latter province extended first to the Adour, then to the Garonne, finally, for a while, to the Loire. Then came a check.

“According to traditions that are not very certain,

the Aquitanian Amandus, about 628, fortified himself strongly in these parts, and beat the Franks by the aid of the Basques, and then the Basques by the aid of the Franks. He is said to have given his daughter to Charibert, the brother of Dagobert, and after the death of his son-in-law to have defended Aquitania, in the name of his orphan grand-children, against their uncle, Dagobert.

"The great-grandsons of Amandus were Eudes and Hubert. The latter passed into Neustria, where reigned the Mayor Ebroin; then into Austrasia, and settled himself near Pepin. He was a great huntsman, and he had the vast forests of the Ardennes in which to chase. The apparition of a miraculous stag decided him to quit the world for the Church. He became the disciple of, and successor to, St. Lambert of Maestricht, and founded the see of Liége. He is the patron of huntsmen from Picardy to the Rhine.

"His brother Eudes had a different career. For a moment he believed himself to be king of all the Gauls. Master of Aquitaine to the Loire, he was also master of Neustria, in the name of Chilperic II., whom he held in his hands. But the lot of all the dynasties of Toulouse has been to be crushed between Spain on the south and France on the north. Eudes was defeated by Charles Martel, and fear of the Saracens, who menaced him in rear, decided him to surrender Chilperic."

The first Saracen invaders were under Moussa, and he plundered Septimania.¹ On his return into Spain, the Khalif, Abd-el-Melek, questioned him relative to the land beyond the Pyrenees, of which he had heard much, but knew so little.

¹ The remains of the Gothic kingdom. It included the towns of Narbonne and Montpellier, and extended to the Rhone from the Pyrenees.

"The Frandj," said Moussa, "are very numerous, and abundantly provided with everything; they are brave and impetuous in attack, but are easily discouraged and thrown out of heart by reverse."

"And how went it in the war with them?"

"By Allah!" answered Moussa, "never once did we taste defeat. Never did our Mussulmans yield before them, though I led forty against fourscore."

That was the signal for a vast tide of Saracens precipitating itself over the entire south of Gaul, and causing misery incalculable.

In 719, having made his peace with Charles, Eudes was prepared to meet the invaders. The Pope, Gregory II., had sent him three sponges, wherewith the altar had been wiped down at the confession of St. Peter. Eudes had these sponges divided into parcels and committed to his battalions; his soldiers, stirred by patriotism and religious enthusiasm, hurled themselves against the infidels, under the walls of Toulouse, and cut them to pieces without mercy. The portion of the Roman road between Toulouse and Carcassonne, where the battle raged, and along which the Arabs fled, and were cut down as they fled, continued to be known in the Arab chronicles under the name of the "Martyrs' Causeway."

In 725 a second irruption of Saracens called Eudes again into the field; a desperate battle ensued. It was indecisive at first, but ultimately won by the Christians, without, however, any further result. The Arabs had made themselves masters of Septimania, had taken Narbonne and Carcassonne, and Eudes was too much crippled by his hard-won victory to dispossess them. He was, moreover, handicapped by the hostility of Charles, who resented the independence of the Duke of

Aquitania, and who was seeking occasion to attack him. Alarmed at the menace from the north, Eudes made peace with the Moslem, and as a price for inactivity in the coming conflict, which he foresaw was inevitable, he gave his daughter to the Saracen general, Abu-nessa.

Next year, 731, Charles declared war against Eudes. Charles, there can be no question, had formed the resolution of uniting the southern provinces of Gaul under one sceptre. He may have seen that by this means only could the Saxon be controlled in the east, and the Saracen driven back in the south.

Whilst Eudes was preparing himself to measure arms with Charles, he learned that a fresh inroad of Mussulmans menaced his rear. Abd-el-Rhaman, suspecting Abu-nessa of an intention to conspire against him, had come, at the head of an immense host, to punish his governor. Lampogia, the beautiful daughter of Eudes, and wife of Abu-nessa, fell into his hands, and he sent her to Damascus, to the harem of the Commander of the Faithful, esteeming no other mortal worthy of such a treasure.

Duke Eudes made a gallant effort to stop the march of Abd-el-Rhaman, but was unsuccessful. The host of the infidels was swelled to the number of 70,000 men; he met with reverse upon reverse, and was driven back under the walls of Bordeaux, where a battle was fought, in which the Christian army was completely routed and cut to pieces. Bordeaux was taken by assault, and delivered over to ravage and plunder. So great was the spoil taken, that, say the Arab historians, "The commonest soldier had for his share plenty of topazes, jacinths, and emeralds, to say nothing of gold, which was as dross."

In consequence of this disaster, Eudes was forced to appeal for help to his enemy, Charles. The latter was

ready to answer the appeal. He imposed an oath of allegiance on the Duke of Aquitaine, and then prepared to meet the Saracens.

The infidels, in the meanwhile, had devastated Périgord, the Saintonge, the Angoumois, Poitou; had burnt the church of St. Hilary in the suburbs of Poitiers, and were marching on Tours, in hopes of plundering the shrine of St. Martin. They were here met by the Franks, and stood face to face for a week; then was fought one of the decisive battles of history, that saved France for ever from subjugation to the Moslem, and that gave to Charles his surname of "the Hammer."

Duke Eudes, relieved from the Saracens, hastened back into his territories, and applied himself to heal the wounds under which they bled, and to re-establish his own authority, with, probably, the intention ultimately of shaking off the yoke of Charles.

The great battle which broke the power of the Saracens in France was fought on a Saturday in October 732. Duke Eudes lived on till 735, and then died, leaving behind him three sons, Hunald, Hatto, and Remistan. He was followed to the grave by Charles Martel in 741, who, as his last act, undid the great work of his life. He had spent his life in consolidating the French power, and binding it into one empire, and now he divided it again between his sons, Pepin the Short and Carloman. Happily, the sons were imbued with their father's spirit, and animated with the same purpose. When Carloman retired to Monte Cassino, five years after the death of Charles, Pepin was left in sole power. Before Carloman resigned, however, he and Pepin had declared war on Hunald, Duke of Aquitaine. The latter appealed to Odilo, Duke of Bavaria; but no help came to

him from this alliance. His brother Hatto refused to unite with him against the sons of Charles the Hammer, as he was held back by his oath of allegiance. Pepin and Carloman passed the Loire, and ravaged Berry, beat the duke, and put him to flight, and forced him to take refuge in Gascony. They were prevented from pursuing their advantage by a revolt of the Germans, which recalled them to the Elbe. Hunald profited by the occasion to cement his union with Odilo. But both dukes were defeated, and Hunald was constrained to sue for peace, and promise to recognise the authority of the brothers. Hostages were demanded, and given up, and then the Frank princes withdrew. If the experience of the past could have inspired wisdom into the Duke of Aquitaine, he would doubtless have remained quiet, content with his position, and have endeavoured to recover his people from the ravages of the past invasions. But no sooner had he concluded peace, than he repented of having sued for it. Ashamed of being regarded as vassal of the Frank princes, he gave himself up to transports of rage; impotent to break the bonds into which he had been cast, he wreaked his vengeance on those who had failed to come to his aid, or who had been in open or secret understanding with the Franks. His brother Hatto had dissuaded revolt, and now Hunald invited him to his court from Poitou, where he lived peaceably, and with the invitation assured him solemnly of his good intentions. No sooner, however, had Hatto arrived, relying on this promise and on the tie of blood, than Hunald tore out his eyes, and flung him into prison.

When Carloman retired from the world, he left his children to his brother's care, but the ambitious Pepin had them shaved and sent into monasteries, and seized on

their inheritance. A third son of Charles Martel, Grippo, had long languished in prison. Pepin released him, and gave him a considerable appanage. But Grippo was not satisfied; he fled to the Saxons, and urged them to revolt. Pepin marched against the rebels, defeated them, and received his brother again into favour. But Grippo would not be won by such generosity; he fled into Aquitaine, and implored assistance from the duke.

Meanwhile, Hunald, filled with remorse at his treatment of his brother Hatto, had abdicated in favour of his son Waifre, and had assumed the monastic habit in the abbey of the Isle of Ré, which had been founded by his father. In 752 Pepin entered Septimania, and dislodged the Saracens from the cities that still remained in their hands. He laid siege to Narbonne, but as the reduction of this place, one of the strongest in Gaul, would have detained him too long, and Waifre was pushing on his preparations for war, Pepin turned from Narbonne, and entered Aquitaine.

Waifre, not prepared to meet him, took refuge in the strongholds of Quercy, on the Lot and the Célé. These were almost impregnable. They were fortified by nature, being caves in the face of the precipices, closed by walls, accessible only by rope-ladders. Pepin was prevented from pursuing him into these fastnesses by a revolt of the Saxons, which constrained him to turn his face towards the Rhine.

Grippo, not believing himself to be secure with Waifre, profited by the withdrawal of Pepin to fly into Lombardy, but he was caught as he was passing the Alps, and perished in a conflict in the valley of Maurienne, 753.

No sooner were the Saxons pacified than Pope Stephen II. arrived in France to implore the assistance

of Pepin against the Lombards. Pepin received the Pope with distinguished honour, promised his help, and in return Stephen crowned Pepin King of the Franks, and the old Merovingian dynasty came to an end.

Waifre was left in peace, whilst Pepin was engaged in humbling Astolph, the Lombard king, and in despoiling him of the exarchates of Ravenna and Pentapolis, which he handed over to the Holy See. Pepin was more or less occupied in Italy till 760; then he resolved on chastising Waifre, who had been making incursions into the Frank territory during his absence. The contest with Waifre engaged Pepin through the last nine years of his life.

The duke had brought war on himself for other reasons than his refusal to consider himself a vassal of the crown. If we may trust the Frank historians, all devoted to the family of Pepin, Waifre had violated the rights of some of the churches in his duchy, which belonged to France, and had made incursions into Septimania, which was united to the crown of France by right of conquest, which right Waifre refused to recognise. But these were mere excuses, put forward by Pepin to cover his determination to make of Aquitania and Gascony an integral part of the realm.

Pepin flung himself into Auvergne and devastated it with fire and sword. As he menaced Poitou with a similar descent, Waifre sent him an embassy desiring peace. This was accorded, but was not of long duration, and if we may trust the partial historians, it was Waifre who violated it. Waifre made an inroad into the Frank domains, burnt Autun, and pushed as far as Châlons-sur-Saone, where he burnt a summer palace of Pepin, and returned behind the Loire laden with spoils. Pepin no sooner heard of this, than he resolved no further to spare the duke. He gathered a large army (762), took the

strong places in Bourbon, passed by Clermont, ravaging the country on all sides, burnt the city, and gave over men, women, and children to the sword. Then he encountered Blando, Count of Auvergne, despatched against him by Waifre, and completely defeated him.

Pepin now passed into the Limousin, which he treated



MALPAS.¹

with similar rigour, but did not extend his ravages as far as Limoges. The peace of Thouars was the fruit of this third campaign.

Next year war broke out again. Pepin assembled his troops at Nevers, traversed the Bourbonnais and Auvergne, and advanced as far as Cahors. All Upper

¹ This rock has suffered from fire that destroyed the fortress to which it served as a natural gate; but tiles of roofs still adhere in grooves upon it.

Quercy and the Limousin suffered greatly. Churches, monasteries, were spared as little as domestic buildings. Vineyards and fields were devastated, the inhabitants of villages and towns given up to the sword. Now, however, as of old, the limestone caves received vast numbers of the people; they fled to them before the legions of Pepin, and disappeared underground, not to reappear till the danger was past. Only the strongholds bored in the faces of precipices, suspended like swallows' nests under the overhanging eaves of limestone, withstood the army of Pepin; they were unassailable, and Pepin had not patience to tarry to reduce them by starvation. Strongholds named as having remained in the hands of Waifre continued to be strongholds of the English or the French through the Middle Ages, lurking-places of the Free Companies, or fastnesses whence the defenders of the land made excursions to control them.¹

The city of Cahors fell into the power of the victor, and was treated with as much remorseless cruelty as if the invading host had been one of Saracens. Happy, indeed, then was it for the inhabitants of Upper Quercy that their land was one of limestone precipices and of *tindouls* or *cloups*.

We know that one of their refuges was in the valley of the Vers; it is not far from the village of St. Martin. The heights on the right bank are crowned by a vast camp. Facing the river is a tremendous precipice, not overhanging, but with a retreating brow covered with short grass slippery as ice. In the face of this crag is a rift, and this rift is overhung by natural arches of rock—stone eyebrows. Any one on the road from La Bastide to St. Géry can see, if he has good eyes, that there exist

¹ Luzech, Roussillon, St. Cirq, Cénevières, Calvagnac, Caudenac, besides the strongholds in the Célé Valley.

two transverse poles fitted into the rock, athwart the opening. Consequently, men have been in that cave, have lived in it, for these poles were employed for lowering and drawing up food and water, and for such as passed in and out of the refuge. Curious stories are



ROCK-REFUGE ON THE VERS.

told of this cave,—as that there is a mysterious figure, large as life, of a soldier, carved in the rock within. I went to St. Martin with my cousin, Mr. George Young, and our friend, M. Raymond Pons of Reilhac, an enthusiast in the matter of exploration of caves. It was our intention to investigate this refuge; we provided ropes, but found that, owing to the retreating head of the precipice and the overarching brow of the cave, it was not possible to enter it from above. It might, how-

ever, be escaladed from below by means of very tall poplars cut down and spliced together. We discovered a peasant who by this means had actually attained to the cavern-mouth, and had entered it. According to his account, he went in some way, saw that the transverse poles had been well worn by ropes that had run round

them, and found the carved figure in the rock, standing as though to guard a door in a wall built across the cave. The man became frightened and beat a hasty retreat.

Unhappily, our attempt to explore this cavern was not successful, owing to the difficulty of getting poplar trees, and the delay it would have occasioned to negotiate the purchase, and get them cut down.

One of the most interesting of Waifre's retreats is that near the fortress of Cénevières. This was perhaps the strongest castle in Quercy. Here Duke Waifre had a stronghold of his own construction, and the ruins are still visible. The present castle, however, which richly deserves a visit, dates from the thirteenth and in part from the fifteenth century, and contains magnificent tapestries. Another of Waifre's strongholds was Gluges; this is a picturesque hamlet on the Dordogne, clinging to the base of a perpendicular cliff, with hardly room for the houses and road. A little church occupies a natural hollow scooped out of the side. In the face of the crag is a terrace, walled, overhanging the roofs, with a cave penetrating deep into the heart of the mountain, and now used as a rope-walk. The little terrace is turned into a garden, but it shows that the sides have been enclosed by walls, and that it has been roofed over, and even remains of fresco adorn some of the caves. Here Waifre maintained himself, but the castellated remains now extant belong to the period of Taillefer (fourteenth century).

The Duke of Aquitaine, who hitherto had opposed Pepin by his lieutenants, now appeared in person at the head of his levies, and delivered battle at Issoudun. But the Gascons could not stand before the Franks; they fell into disorder and fled. Fredegar says of them: "They

gave way at the first shock, as is their wont—and so caused the rout of the Aquitanians."

Waifre, despairing of success by arms, had recourse to negotiation. He sent ambassadors to the king, entreating peace, and the restitution of the conquered territory, and promised allegiance and tribute. But Pepin refused to listen to the overtures; he was resolved to quell for ever this troublesome vassal, and to unite Aquitaine and Gascony to the crown. Then Thassillo, Duke of Bavaria, who reluctantly had accompanied Pepin, took alarm; he believed that it was the Frank king's intention to extinguish him after he had snuffed out Waifre. Accordingly, he retired from the army, under pretext of sickness, returned to his duchy, and proclaimed his independence.

Pepin believed him to be acting in intelligence with Waifre. He hastily withdrew from Aquitaine and convoked a diet at Worms to deliberate on the steps to be taken (764). The cold of that winter was intense, and lasted without intermission from December 14, 763, to the 10th April following. It destroyed vast numbers of trees, rifted with the frost, the crops were killed in the ground, cattle perished of hunger, and a general famine prevailed.

Waifre profited by the absence of Pepin, and his inability to take the field owing to the inclemency of the winter, to prepare to renew the conflict. All that portion of Aquitaine that had been conquered by the king returned to its allegiance.

As soon as the snow melted, Waifre took the field and fell on the territory of Pepin at several points; but fortune was again adverse. As a climax to his difficulties, at this juncture, his uncle Remistan abandoned his side and joined Pepin, who loaded him with rewards, and gave

him the castle of Argenton, which he was to hold against his nephew. Waifre now took a step of the most extraordinary imprudence, and one which assured his downfall. He was discouraged about the fortified towns which had been taken in previous campaigns by Pepin without long resistance, and he concluded that they were useless in war as consuming large bodies of able-bodied men to form garrisons, and he believed that these men might be of greater service in the field. He therefore dismantled the towns. Thus he levelled the walls of Poitiers, Limoges, Saintes, Périgueux, and Angoulême. By this course he threw away his main protection against a rapid and overwhelming advance of the enemy.

Pepin at once saw his opportunity, and in 766 swept down over Aquitaine, which was now powerless to resist him and to hamper his advance. Limoges yielded without a blow. He swooped down on Agen, and the duke was unable to face him. For the great nobles, seeing their lands devastated and their castles pillaged, deserted Waifre, and hastened to make their submission to the conqueror. Pepin now annexed the Albigeois, the Gevaudan, and the Rouergue, and there remained to Waifre only the castles in inaccessible places.

In this emergency Remistan revolted and declared for his nephew. He placed himself at the head of the Aquitanian musters, and beat the royal forces in several engagements. Pepin, who had retired, was forced to again return to the scene of conflict, and he speedily put the new levies to flight. Waifre was now constrained to pass from one fortress and hiding-place to another; and Pepin pursued him with indomitable resolution, capturing castle after castle.

One of the last strongholds to fall was that of Brengues.

This is in fact nothing more than a honeycombed rock, with the openings walled up more or less completely. It is accessible from beneath, but only by a very steep climb, and by clinging on to the juniper and box bushes which grow in the interstices of the rock or among the fallen



BRENGUES.

rubble. In later ages it came into the possession of the family of Cardaillac, and played its part in the troublous times of the Hundred Years' War.

On the opposite side of the valley, in a sheer face of Dolomitic limestone, opens a small cave, about 60 feet below the head of the cliff. Hither, according to popular traditions, Duke Waifre fled with all his treasures when the

troops of Pepin laid siege to his castle at Brengues and took it. Faithful servants kept a basket supplied with food, which he pulled up from below during the night, and when the castle of Brengues was reduced, here he remained concealed till it was safe for him to escape, and the soldiers of Pepin were unaware that he had been hiding within an arrow-shot of them.

By means of a rope from above it is possible to reach the cave, and M. R. Pons resolved to explore it. He was not wholly uninfluenced by the popular belief that within he might light on the treasures of Duke Waifre. Accordingly, one day in early spring, he and I drove to the château of Tremolet, belonging to his cousins, to whom the cliff and surrounding land belongs; and M. Tremolet readily furnished the requisite ropes and men, and the demoiselles Tremolet, greatly interested, and not a little hopeful of treasure trove, accompanied us to the top of the limestone plateau.

Here a stout stick was attached to a rope, and another was slung round the head and shoulders of M. Pons, and he was thrust over the edge. Six men held the rope and gradually lowered him. The cliff is here 400 feet above the river. Unluckily the lowering was done a little too much on one side. It is not possible when on the edge of the precipice to determine exactly the position of the cave; consequently, M. Pons was pulled up again, and again lowered. I went to some distance, to a projecting crag, whence I could see the cave, and give directions where the lowering was to take place. The second time was also unsuccessful. M. Pons saw a fissure in the face of the cliff to his left, and worked his way towards it, whilst the men above shifted the position of the rope as well as they were able, not, however, without considerable

danger on account of the friction caused by the saw-like edges of rock. The cave reached by M. Pons was, however, a supplemental one, and not that designed to be entered. He believed he was in Waifre's refuge, and I was obliged to leave my point where I could see the proceedings, to endeavour to get the men if possible to shift the cord still farther, and let it down somewhat lower. Meanwhile, it was not possible to communicate with M. Pons. A man lay flat on the ground, put his head over the edge, and shouted to him that he was in the wrong cave, but his voice was lost in the abyss of the gorge of the Célé.

At this conjuncture a thunderstorm that had been for some time brewing exploded with tremendous force; the lightning glared on the white cliffs, and the detonations boomed in long echoes down the ravine. Moreover, a slashing rain came on. It was now absolutely necessary that M. Pons should be brought up. A sudden and close crash of thunder might unnerve the men holding the rope, they might relax their clutch, and a human life would have been lost. As M. Pons said, with his own men, accustomed to abysses, he would not have feared, but raw hands could not be trusted. Accordingly, after having enjoyed the kindly hospitality of M. de Tremolet, we drove back to Reilhac, our purpose unaccomplished.

The venture of M. Pons, however, created such a stir in the neighbourhood that some peasants resolved to forestall a further expedition by him, and themselves carry off the treasure. They obtained a stout basket and let down one of their number; but the rope became twisted, the basket swung round and round, making the occupant sick and giddy, and, being unprovided with a crook, he was unable to lay hold of the rock and draw himself in at

the cave door. This attempt also proved abortive. A second time, however, M. Pons, determined not to be beaten, made another descent, and on this occasion with better success. He found in the cave entrance a transverse roller, very greatly worn, fixed into the rock at each end, but of treasure—nothing.

Every fortified place in Quercy having fallen into the hands of Pepin, Waifre was constrained to fly into Périgord, where also he hid in cave-castles in the chalk, and in the depths of oakwoods.

Pepin now turned his attention to Remistan, who was harassing him in rear. He sent a body of troops to observe him without hazarding an engagement, and to endeavour to get possession of his person. This they succeeded in effecting. Remistan was caught in an ambush and hung to the nearest tree. At the same time, the mother, sister, and nieces of Waifre fell into the hands of Pepin, and were treated with humanity. All Gascony now submitted (768), and Pepin retired to the Loire for Easter ; but, hearing that Waifre was still at large and engaged in stirring up revolt, he again went in pursuit of him, and detached troops throughout Périgord to scour the country. Moreover, he offered large bribes to any who would bring him the duke, alive or dead, and corrupted by these promises, some of Waifre's servants assassinated him whilst he was asleep, on the night of June 2, 768. Pepin despoiled the body of the gold bracelets adorned with large pendent gems which the unfortunate duke had been accustomed to wear, and gave them to the Abbey of St. Denis, where they long remained, and went by the name of the "The Pears of Waifre."

Thus ended the last of the hereditary dukes of Aquitaine.

The body of Waifre was conveyed to Limoges. Under the beautiful fourteenth-century church of sculptured granite is a crypt that contained the tomb of St. Martial, the apostle of the Limousin, and also the great sarcophagus of the last of the early dukes of Aquitaine. At the Revolution it was torn out, his bones scattered, and the sarcophagus was converted into a pump-trough. In the wall of the crypt is a curious piece of carving; it represents an uncouth figure of a man whose arms have been broken off, and below him a lioness that is suckling three whelps. Beneath this is an inscription that has somewhat puzzled antiquaries. But its meaning seems to be this:—

“The dukes engendered and crowned by Aquitaine have been her misfortune. Waifre, her unnatural child, oppressed his mother, but his crime cost him his life, and he suffers the penalty of his deeds.”¹

The monument goes by the name of La Cliche, and the tomb was wont to be called Tève le Duc. Tève is Taif or Waif. The inscription was undoubtedly raised by his enemies, who even when he was dead would not spare the unfortunate man who had battled so gallantly for the independence of his country.

¹ Alma leæna Duces sævos parit atque coronat
Opprimit hanc natus Waifer malesanus alumnam
Sed, pressus gravitate, luit sub pondere pænas.

END OF VOL. I.

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